BULLETIN
of the
Chicago Herpetological Society

Volume 32, Number 5
May 1997

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Notes on an Established Population of Jackson's Chameleons (*Chamaeleo jacksonii xantholophus*) in California . . . Sean McKeown 101

Distribution and Variation of the Lizard *Cnemidophorus sexlineatus* in Indiana . . . . . Sherman A. Minton and Dennis Brown 102

A Note on the Foraging Behavior of the River Cooter (*Pseudemys concinna*) . . . . . Michael J. Dreslik 105

First report of *Peltophryne lemur* from St. John, U.S. Virgin Islands . . . . . Robert L. Norton 106

A Partially Albinistic Northwestern Garter Snake, *Thamnophis ordinoides* (Reptilia, Serpentes, Colubridae), from Washington State . . . . . Bradford R. Norman 107

Book Review: *Coral Snakes of the Americas: Biology, Identification and Venoms* by Janis A. Roze . . . . . Hobart M. Smith 109

Two Husbandry Ideas Appropriate for the Technologically Impaired . . . . . Ilene Sievert 110

Creatures of Habitat: Lincoln Park Zoo's New Small Mammal and Reptile House . . . . . Jill Horwich 111

HerPET-POURRI . . . . . Ellin Beltz 113

Unofficial Minutes of the CHS Board Meeting, April 18, 1997 114

Herpetology 1997 116

Advertisements 118

News and Announcements 120

Cover: Female Jackson's chameleon, *Chameleo jacksonii xantholophus*. Photograph by Sean McKeown.

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The BULLETIN of the Chicago Herpetological Society (ISSN 0009-3564) is published monthly by the Chicago Herpetological Society.

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Bull. Chicago Herp. Soc. 32(5):101, 1997

Notes on an Established Population of Jackson's Chameleons (*Chamaeleo jacksonii xantholophus*) in California

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Individual yellow-crested (Mt. Kenya) Jackson's chameleons (*Chamaeleo jacksonii xantholophus*) have previously been reported living in a feral state in Morro Bay on the central coast of California and in Redondo Beach and San Diego along the southern coast of California (McKeown, 1995). However, until now, no surveys have been undertaken to determine whether or not this species might be established at one or more of these locations.

During the latter part of 1995 and 1996, the author had the opportunity to survey populations of this lizard in the town of Morro Bay in San Luis Obispo County, California. Yellow-crested Jackson's chameleons were found to occur in an area approximately one mile (1.6 km) by 0.5 mile (0.8 km). Both adults and juveniles were encountered. The chameleons were observed largely in hedges and on trees in backyards in residential neighborhoods of this beach community. The existence of this established population can be traced to an accidental release on 16–17 July 1981.

A long-term reproductive colony of these lizards was maintained by a major reptile breeder/dealer living in Morro Bay during the 1970s and 1980s. While the bulk of the collection was housed in an indoor reptile room, the Jackson's chameleons were maintained in a large outdoor screened enclosure in his yard behind his residence.

On 16 July 1981, this individual was one of many reptile dealers targeted during the first nationwide herptile sting operation by the United States Fish and Wildlife Service. In the early morning hours of 16 July, federal and state agents raided his home looking for native species of reptiles and amphibians. During the search of the house and surrounding premises, the door to the chameleon enclosure was inadvertently left open. Since the focus of the government raid had been on the residence, it was not until the following afternoon that the open door to the chameleon enclosure was discovered. By that time, many of the Jackson's chameleons inside had escaped into the surrounding neighborhood.

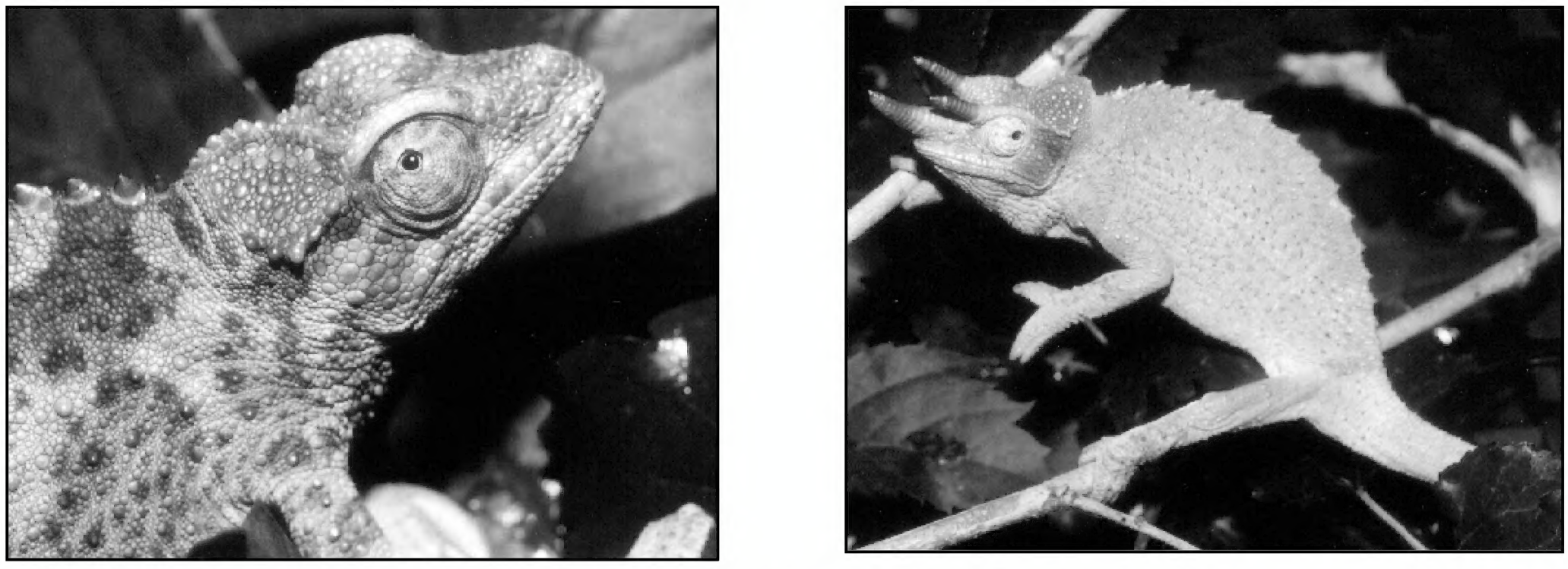
This Morro Bay population of Jackson's chameleons is of additional interest because of its provenance. Although the ancestors of these particular lizards were exported out of Kenya into the United States by Jonathan Leakey, they are unrelated to the now widespread population of yellow-crested Jackson's chameleons in the Hawaiian Islands. To date, it is the Hawaiian population that is the source of specimens found in American herpetoculture (McKeown, 1996).

A subadult female, the last of five Jackson's chameleons known to have been killed by a single Morro Bay house cat (*Felis catus*) during 1996, was obtained by the author. This lizard was placed in the department of biology museum collection (#H5100) at California Polytechnic State University, San Luis Obispo.

Literature Cited

McKeown, Sean. 1995. P. 38. *In*: de Vosjoli, Philippe and Gary Ferguson, eds. Care and Breeding of Panther, Jackson's, Veiled and Parson's Chameleons. The Herpetocultural Library, AVS.

McKeown, Sean. 1996. A Field Guide to Reptiles and Amphibians in the Hawaiian Islands. Diamond Head Publishing Company, Inc. p. 60.



Female (left) and male (right) Jackson's chameleons, *Chameleo jacksonii xantholophus*. Photographs by Sean McKeown.

Bull. Chicago Herp. Soc. 32(5):102-104, 1997

Distribution and Variation of the Lizard *Cnemidophorus sexlineatus* in Indiana

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Abstract

Recent and historical Indiana records of the six-lined racerunner (*Cnemidophorus sexlineatus*) are reviewed. Its distribution in the state differs from that of any other reptile or amphibian. Its largest populations are in the Lake Michigan dunes and Kankakee sand prairies with small, relict populations in west central and southwestern sand areas and in glades of the knobstone escarpment. Examination of 61 specimens from four regions indicates slight differences in lepidosis, color and pattern between northwestern, southwestern and knob populations. This suggests separate origins for these populations; we question recognition of two subspecies in the state.

The six-lined racerunner (*Cnemidophorus sexlineatus*) is the sole eastern North American representative of its genus which ranges from the western United States to Argentina but attains greatest diversity in the southwestern United States and Mexico. Biology of *Cnemidophorus* has recently been reviewed by Wright and Vitt (1993). The general range of *C. sexlineatus* is from southern Maryland south to the Florida keys and west to southeastern Minnesota and southeastern Wyoming, thence south to the southern tip of Texas (Conant and Collins, 1991). However, it is absent from most of the Appalachians, and distribution in the Midwest is extremely spotty (Figure 1).

Distribution of this lizard in Indiana (Figure 2) is unlike that of any other reptile or amphibian, although there are similarities with the distributions of the ornate box turtle, western ophisaur and bull snake, all prairie species. The two centers of abundance are the Lake Michigan dunes from Clark and Pine Nature Preserve near Gary to the outskirts of Michigan City and the Kankakee Sands south of the Kankakee River from southern Newton County east to the vicinity of Winamac. These two populations seem to be largely separated; the only record for the intervening territory is Hoosier Prairie Nature Preserve at Griffith, Lake County. In the Plainville Sands region of southwestern Indiana, small colonies of *Cnemidophorus* have recently been located near Oaktown, Knox County (Brown and Harvey, 1994) and near Owensville, Gibson County. Hay (1892) reported a sight record from Monteur's Pond, Knox County, and there are specimens from an unspecified Knox County locality collected by W. S. Blatchley, probably about 1900. Subfossil *Cnemidophorus* vertebrae have recently been found at Sugar Loaf Mound southwest of Vincennes (Richards, unpublished). Burt (1931) cites a New Harmony specimen; we have been unable to locate it. A fourth *Cnemidophorus* population occurs in Floyd County on the glades or balds of the knobstone escarpment north of New Albany. In western Tippecanoe County is a fifth population in a small sandy area near the Wabash, and a sight record for Wea gravel prairie near Lafayette. There evidently was once a population in Monroe County. McAtee (1907) writes, "There is one specimen in the museum. . . . A. W. Butler reports another, and I have one that was captured in 1901." The National Museum of Natural History has a Bloomington specimen collected in 1882; whether it is one of those mentioned by McAtee is unknown. Hughes (1885) gives a sight record for Franklin County. We reject this record because there are no further reports from this comparatively well collected section of the state, and there appears to be no favorable habitat for *Cnemidophorus* in the county.

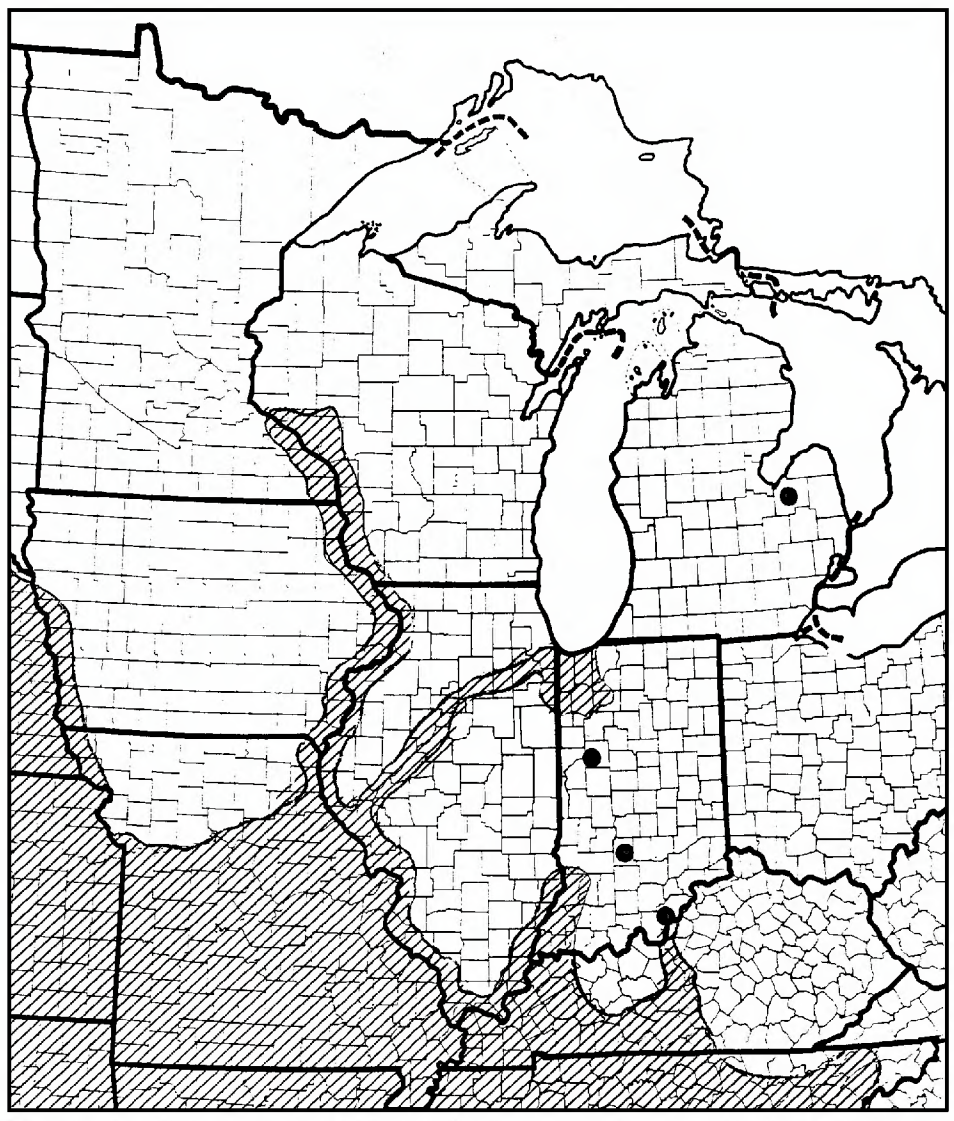

Figure 1. Distribution of *Cnemidophorus sexlineatus* in the Midwest, modified from Conant and Collins (1991).

Currently three subspecies of *Cnemidophorus sexlineatus* are recognized. The typical form described by Linnaeus from "Carolina" occurs east of the Mississippi, while *C. s. viridis* (Lowe, 1966) occupies the western portion of the range. It is diagnosed by usually having 7 rather than 6 yellow longitudinal stripes, green suffusion of the head and lateral aspect of the body in adults, low counts of granules around the body (mean 76.6) and paravertebral granules (mean 10.4). Trauth (1992) described *stephensi* (later emended to *stephensae* [Trauth, 1995]) from extreme southern Texas. Conant and Collins (1991), possibly following Trauth (1980), assigned the six-lined racerunners of northern Indiana to *viridis* and those of southern

Table 1. Counts of occiput–rump, midbody, paravertebral and lateral supraocular granules of Indiana *Cnemidophorus sexlineatus*. Figures in parentheses are means.

		Number of Granules			
Locality	N	Occiput–Rump	Midbody	Paravertebral	Lateral Supraocular
Lake Michigan Dunes	30	185–254 (221.3)	87–103 (96.8)	13–18 (15.1)	13–21 (16.8)
Kankakee Sands	18	184–241 (216.5)	81–100 (89.8)	12–16 (13.5)	10–19 (15.1)
Plainville Sands	7	163–220 (194.5)	71–91 (78.4)	9–15 (11.6)	10–17 (13.7)
Knob Glades	4	179–204 (190.5)	83–90 (85.2)	15–17 (15.7)	12–27 (21.0)
Tippecanoe County	1	169	75	13	18

Indiana to *sexlineatus*. In a recent review of the species, Trauth and McAllister (1996) state, "The western race (*viridis*) occurs in Illinois, northern and southern Indiana, and Wisconsin. . . ." However, their map indicates all southern Indiana *Cnemidophorus* records are assigned to *sexlineatus* and northern records to *viridis*. Illinois distribution indicates *sexlineatus* in extreme southeastern Illinois, *viridis* along the Illinois and most of the Mississippi drainage, and an area of intergradation along the Mississippi in southwestern Illinois. Recently a highly disjunct *Cnemidophorus* population has been reported in Tuscola County, Michigan (Harding and Holman, 1990).

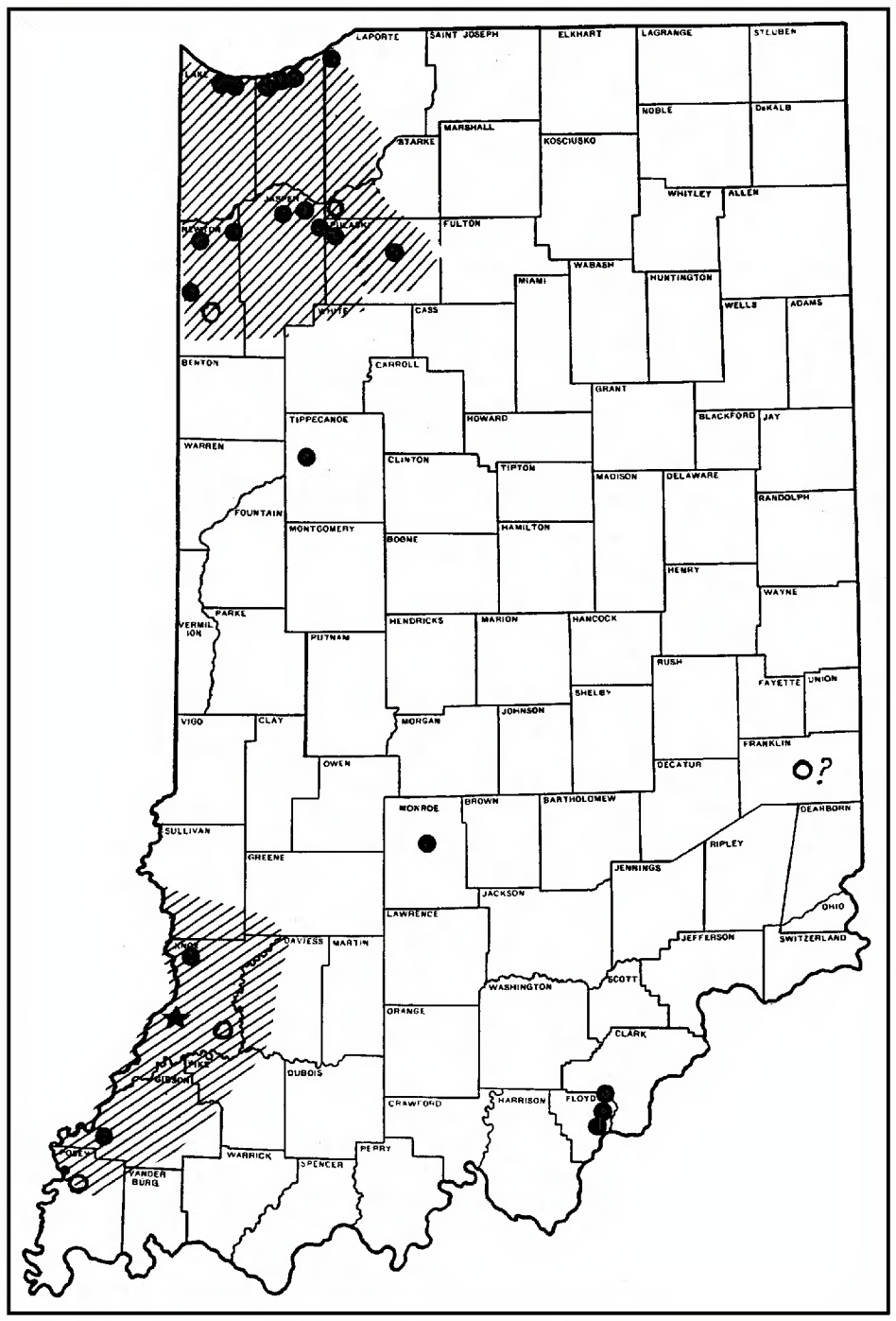

Figure 2. Records and presumed distribution of *Cnemidophorus sexlineatus* in Indiana. Solid symbols are records supported by museum specimens examined. Hollow symbols are literature or sight records. Star represents record based on subfossil material.

In an effort to clarify the picture of racerunner variation and subspecies distribution in Indiana, we examined 61 Indiana specimens with respect to counts of granules at midbody, paravertebral granules (those between the pair of midline stripes), granules from occiput to rump, lateral supraocular granules, femoral pores, upper and lower labials, rings of caudal scales, pattern, and color in life. Counts of granules are shown in Table 1. Counts of femoral pores, labials, and tail rings revealed no differences among populations. All Indiana specimens had 6 light dorsal stripes; 9 showed a poorly defined seventh stripe. Not enough live specimens in this series were examined to permit generalization about color; however none were strongly green anteriorly.

We reach the following conclusions regarding geographic variation of *Cnemidophorus sexlineatus* in Indiana: There are no significant differences between the Lake Michigan Dunes and Kankakee Sands populations. Mean counts for midbody granules (94.2) and paravertebral granules (14.5) are considerably higher than means for *viridis*. Green pigmentation was faint or lacking in live animals examined. The Plainville Sands population shows the strongest trend toward *viridis* with low mean count for midbody granules (78.4) and for paravertebral granules (11.6). Three specimens show a seventh stripe, and at least two or three live adults showed green pigment anteriorly in life. The knobstone escarpment specimens have a high percentage of body granules in the paravertebral stripe (18.4) in comparison with the northern population (15.0) and southwestern population (14.6). They also have the highest count of lateral supraocular granules and the lowest number of occiput to rump granules. The single Tippecanoe County specimen appears slightly closer to the southwestern population in count of midbody and occiput to rump granules. The Bloomington specimen is badly shrunken and discolored; it has 15 paravertebral granules and 21 lateral supraorbitals. Other granule counts could not be obtained.

Data we have suggest three different origins for Indiana *Cnemidophorus* populations corresponding to incursions along the Illinois River, the Wabash and the knobs of central Kentucky (see Figure 1). However, differences among the popula-

tions are slight. We see no reason to recognize more than one subspecies of *sexlineatus* in Indiana.

Status of northwestern Indiana populations of the six-lined racerunner is relatively good; most are within the Indiana Dunes National Lakeshore and in protected areas in Newton, Jasper, and Pulaski Counties. The known populations in southwestern Indiana and Tippecanoe County appear healthy but occupy very restricted areas surrounded by unsuitable or marginal habitat. Racerunners were once plentiful in the knobstone escarpment glades where they lived on steep claystone slopes rather than on sand. About 1970 they began to decrease associated with undergrowth encroaching on the bald areas and conversion of the small farms to suburban development. Today this interesting population has virtually disappeared. There is seemingly favorable glade habitat in Harrison and Perry Counties, but *Cnemidophorus* has not been found there. No one knows where the lizards were found in Monroe County, but hilltop glades seem the most likely habitat.

Acknowledgments

For loans of specimens from collections in their care, we are indebted to John Cadle, Museum of Comparative Zoology, Harvard University; W. Ronald Heyer, National Museum of Natural History, Washington, D.C.; Arnold Kluge, University of Michigan Museum of Zoology; Alan Resetar, Field Museum of Natural History, Chicago; and Ron Richards, Indiana State Museum. We thank Dr, Stanley Trauth, Arkansas State University and Dr. John W. Wright, Curator Emeritus of the Los Angeles County Natural History Museum for their comments and reprints.

Literature Cited

Brown, D. R., and J. Harvey. 1994. Geographic distribution: *Cnemidophorus sexlineatus*, Herp. Rev. 25:76.

Burt, C. E. 1931. A study of the teiid lizards of the genus *Cnemidophorus* with special reference to their phylogenetic relationships. U.S. Nat. Mus. Bull. 124.

Conant, R., and J. T. Collins. 1991. A field guide to reptiles and amphibians: eastern and central North America. Boston: Houghton Mifflin.

Harding, J. H., and J. A. Holman. 1990. Michigan turtles and lizards. East Lansing, MI: Michigan State University Museum.

Hay, O. P. 1892. The batrachians and reptiles of the state of Indiana. Ann. Rept., Ind. Dept. Geol. Nat. Resources 17.

Hughes, E. 1885. Preliminary list of reptiles and batrachians of Franklin County, Indiana. Bull. Brookville Soc. Nat. Hist. 1:40-45.

Lowe, C. H. 1966. The prairie lined racerunner. J. Ariz. Acad. Sci 4:44-45.

McAtee, W. L. 1907. A list of the mammals, reptiles, and batrachians of Monroe County, Indiana. Proc. Biol. Soc. Wash. 20:1-16.

Trauth, S. E. 1980. Geographic variation and systematics of the lizard *Cnemidophorus sexlineatus* (Linnaeus) in the United States. Ph.D. thesis, Auburn University, Auburn, AL.

———. 1992. A new subspecies of six-lined racerunner, *Cnemidophorus sexlineatus* (Sauria: Teiidae) from southern Texas. Tex. J. Sci. 44:437-439.

———. 1995. An emendation to the subspecies name *Cnemidophorus sexlineatus stephensi* (Sauria: Teiidae). Bull. Chicago Herp. Soc. 30(4):68.

Trauth, S. E., and C. T. McAllister. 1996. *Cnemidophorus sexlineatus*. Catalogue Amer. Amphib. Reptiles 628.1-628.12.

Wright, J. W., and L. J. Vitt. 1993. Biology of whiptail lizards (genus *Cnemidophorus*). Norman, OK: Oklahoma Museum Nat. Hist.

Bull. Chicago Herp. Soc. 32(5):105, 1997

A Note on the Foraging Behavior of the River Cooter (*Pseudemys concinna*)

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The river cooter, *Pseudemys concinna*, is a herbivorous or chiefly herbivorous species (Lageaux et al., 1995; Thomas et al., 1994; Buhlmann and Vaughan, 1991; Marchand, 1942; Allen, 1939; Parker, 1939) with its digestion being aided through a symbiotic relationship with cellulolytic bacteria in the gut (Thomas et al., 1994). In Illinois the species was also found herbivorous and to have over 98% of the fecal volume composing two genera of filamentous algae, *Cladophora* and *Oedoginium* (Dreslik, 1996). What has been lacking, however, is a general account of the foraging behavior of *P. concinna*. In this account I report on the behavior used by a small *P. concinna* from a floodplain lake in southern Illinois (Round Pond, Gallatin County).

At 1530 h on 17 May 1994, while conducting a status survey of the species, I observed a *P. concinna*, probably a male based on its elongated foreclaws, swim through a colony of spatterdock (*Nuphar luteum*) to a submerged branch (water depth was approx. 50 cm). The behavior is represented by three phases: 1) inspection; 2) posture; and 3) consumption. In the inspection phase, the *P. concinna* swam along the branch several times, apparently searching for epiphytic algae by either visual or chemosensory cues. Once the *P. concinna* found algae, it began the posture phase by swimming to face the branch, then placing its forefeet, claws facing each other, on the branch. In the final consumption phase, the turtle opened its mouth and began to tear off algae by simultaneously shaking its head and pushing the branch with its forefeet. This behavior commenced for approximately five minutes and upon its completion of feeding I attempted to catch the individual, but was unsuccessful. No determination of sex, age or body dimensions could be made.

This article is part of a long-term ecological monitoring study on *Pseudemys concinna* in Illinois. Funding for studies on the river cooter in Illinois has been provided by: Illinois Department of Natural Resources, Chelonian Research Foundation, Eastern Illinois Council on Faculty Research, Eastern Illinois Zoology Department and Eastern Illinois Honors Program. I would like to thank E. O. Moll for reviewing this manuscript and E. Leon Bryant and J. R. Dreslik for helping with fieldwork at Round Pond.

Literature Cited

Allen, E. R. 1939. Notes on the feeding and egg-laying habits of the *Pseudemys*. Proc. Florida Acad. Sci. 3:105-108.

Buhlmann, K. A., and M. R. Vaughan. 1991. Ecology of the turtle *Pseudemys concinna* in the New River, West Virginia. J. Herpetology 25:72-78.

Dreslik, M. J. 1996. Ecology and community relationships of the river cooter, *Pseudemys concinna*, in a southern Illinois backwater. M.S. Thesis, Eastern Illinois University, Charleston.

Lagueux, C. J., K. A. Bjorndal, A. B. Bolten and C. L. Campbell. 1995. Food habits of *Pseudemys concinna suwanniensis* in a Florida spring. J. Herpetology 29:122-126.

Marchand, L. J. 1942. A contribution to a knowledge of the natural history of certain freshwater turtles. M.S. Thesis, University of Florida, Gainesville.

Parker, M. V. 1939. The amphibians and reptiles of Reelfoot Lake and vicinity with a key for the separation of species and subspecies. J. Tenn. Acad. Sci. 14:72-101.

Thomas, R. B., D. Moll and J. Steiert. 1994. Evidence of a symbiotic relationship between cellulolytic bacteria and a freshwater herbivorous turtle. Southwest Nat. 39:386-388.

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Bull. Chicago Herp. Soc. 32(5):106-107, 1997

First report of *Peltophryne lemur* from St. John, U.S. Virgin Islands

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Abstract

The Puerto Rican crested toad (*Peltophryne lemur*), an endangered species, was historically reported to have a disjunct distribution on the eastern Puerto Rican marine platform with little or no new information of its range since its rediscovery on Puerto Rico in the 1960s. Indeed, the toad is currently reported to have its entire distribution on Puerto Rico proper because no new information is available on the British Virgin Islands locale. Wildlife surveys conducted in the American Virgin Islands in 1978 revealed a single specimen found at Lameshur Bay, St. John, for the first time filling a distributional gap on the PR marine platform. The Virgin Islands habitat appears to be similar to that of Puerto Rico in one major component: stream outfalls with well-drained alluvium within the narrow flood plain of these mountainous islands.

The zoogeography of the Puerto Rican crested toad (*Peltophryne lemur* Frizinger) on the Puerto Rico platform is scanty with about 97% of records (34 specimens) from Puerto Rico proper from 1868 to 1966 (Garcia-Diaz, 1967). A single specimen (formerly *Bufo turpis* Barbour) was collected on Virgin Gorda, British Virgin Islands, 170 km ENE of Puerto Rico, in 1915 (Barbour, 1917).

On 6 April 1978 while surveying wildlife in the remote Lameshur Bay, St. John (18°19′N, 64°44′W), I came upon a toad which most reminded me of Fowler's toad (*Bufo woodhousii fowleri*), a species with which I had been familiar in New England. The small toad, perhaps a male, was about 6.5 cm in length, had tawny brown coloration dorsally, and a pale buff to yellowish color ventrally. The skin was dry and pebbly like other bufonids I have seen and handled. When it moved, it hopped rather than leaped like a frog. The most peculiar aspect of the toad was the bony ridges over each eye. The small toad at Lameshur Bay appeared to have an upright body posture and narrower shape than *Bufo marinus* that was widely distributed on St. Thomas, but not seen by me on St. John from 1978 to 1989.

The occurrence of such a vulnerable creature as this toad was hard for me to believe because of the fairly common presence of the Small Indian Mongoose (*Herpestes auropunctatus*) on St. John, particularly near VIERS (the College of the Virgin Islands Ecological Research Station). Indeed, Schmidt (1928) suggested the mongoose was responsible for scarcity of the toad on Puerto Rico. The disjunct population of the Virgin Islands boa (*Epicrates monensis granti*) has also been attributed in part to the presence of mongoose on St. John (Nellis et al., 1983). The site location was an alluvial deposit at the base of a ghut (gulley) at Lameshur Bay (Norton, 1979). After heavy spring rains, this deposit is scoured out by the force of rushing water enough to leave a pool of about 1.5 m in depth that might stay in the depression for several days. I could not, nor did I want to, collect this specimen because of the strict wildlife collecting policy within the U.S. National Park on St. John, where I encamped for a three-month residency at VIERS.

After reviewing limited sources at the time on the status of toads in the Virgin Islands (Philibosian and Yntema, 1977; MacLean, 1982), I came to the conclusion that this, albeit uncollected, specimen is of incontrovertable importance and should be reported notwithstanding the circumstantial nature of the observation. My in-the-hand observation from which I have an almost tactile recollection of the unusual character of the head leads me to conclude that this specimen was *Peltophryne lemur*. New sources of information (Garcia-Diaz, 1967; Rivero et al., 1980) now available to me further emphasize the value of this observation.

I recognize the weight of the circumstantial evidence presented, yet I suggest new awareness of this poorly known endemic may alert herpetologists, and others, to renew their acquaintance with *Peltophryne lemur* and potential for rediscovery and protection. Given an opportunity to search remote sites, it is my belief that small populations of the toad may still be extant in the Virgin Islands, especially where mongoose is absent or scarce.

I am grateful to Jose Mari-Mutt and his colleagues for providing me with a copy of Garcia-Diaz (1967).

Literature Cited

Barbour, T. 1917. Notes on the herpetology of the Virgin Islands. Proc. Biol. Soc. Wash. 30:97-104.

Garcia-Diaz, M. 1967. Rediscovery of *Bufo lemur* (Cope) and additional records of reptiles from Puerto Rico. Stahlia 10:1-6.

MacLean, W. P. 1982. Reptiles and amphibians of the Virgin Islands. London: Macmillan Caribbean.

Nellis, D. W., R. L. Norton and W. P. McLean. 1983. On the biogeography of the Virgin Islands boa, *Epicrates monensis granti*. J. Herpetology 17:413-417

Norton, R. L. 1979. New records of birds for the Virgin Islands. Amer. Birds 33:145-146.

Philibosian, R., and J. A. Yntema. 1977. Annotated checklist of the birds, mammals, reptiles and amphibians of the Virgin Islands and Puerto Rico. Information Services, St. Croix.

Rivero, J. A., H. Mayorga, E. Estremera and I. Izquierdo. 1980. Sobre el *Bufo lemur* Cope (Amphibia, Bufonidae). Carib. J. Sci. 15: 33-40.

Schmidt, K. P. 1928. Amphibians and land reptiles of Porto Rico, with a list of those reported from the Virgin Islands. Sci. Surv. of Porto Rico and the Virgin Islands 10:1-160. New York Acad. of Sci.

Bull. Chicago Herp. Soc. 32(5):107-109, 1997

A Partially Albinistic Northwestern Garter Snake, *Thamnophis ordinoides* (Reptilia, Serpentes, Colubridae), from Washington State

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Arcata, CA 95521

Apparently no published records of albinism in the northwestern Pacific Coast serpent species *Thamnophis ordinoides* existed until 1995 when Brown et al. (1995: 147) presented a photograph of the head of a completely albinistic specimen from Thurston County, Washington (Cooper, 1958; Hensley, 1959; Nussbaum et al., 1983; Dyrkacz, 1981). The ground color in normal specimens of *T. ordinoides* is usually dark brown, olive, bluish, gray or black (Stebbins, 1985), although red has been reported as an atypical ground color variation in that species from a locality in Washington State (Norman, 1978). Smith and Brodie (1982) list the following ground colors as possible for *T. ordinoides*: "black, brown, red, greenish, or bluish."

Partial albinism (leucism) to complete albinism had been reported in only five species of the garter snake genus *Thamnophis* prior to 1995: *elegans* (Svihla, 1936; Dyrkacz, 1981), *sirtalis* and *radix* (Hensley, 1959; Dyrkacz, 1981; Shively and Mitchell, 1994), *sauritus* (Rose, 1959; Dyrkacz, 1981) and *butleri* (Dyrkacz, 1981). Erythrism (Marvin, 1943; Carpenter, 1948; Norman, 1978) and melanism (Brown, 1903; Logier, 1930; Blanchard and Blanchard, 1941; Fitch, 1941; Johnson, 1947; Johnson and Slater, 1949; Hebard, 1950; Mason et al., 1991) are well-documented in the genus *Thamnophis* and in *T. ordinoides* in particular (Hart, 1934; Norman, 1978; Nussbaum et al., 1983; Stebbins, 1985).

An additional unusual specimen of *T. ordinoides* (PSM #10200) exhibiting distinct partial albinism was examined by the author in the James R. Slater Natural History Museum Herpetological Collection (PSM) at the University of Puget Sound, Tacoma, Washington, and is described below:

Having been in preservative for many years and examined under bright light (100-watt incandescent bulb) the entire snake is now a uniform, pale pinkish-brown above and below; the supralabials are slightly lighter in hue as is the tail; eyes, in direct light, appear deep red with a pink iris; rostral with an indistinct darker patch; no indications of vertebral or lateral striping are visible though the specimen's emaciated condition results in a dermal fold extending longitudinally along either side of the lateral body and a slight vertebral indentation appears as a stripe in poor light due to shadowing; an azygomatic suture is present on the left scale of the posterior internasal pair; each supraocular exhibits an azygomatic suture-like indication of an incompletely differentiated temporal scale; dorsal scales in 17-17-15 rows; supralabials 7-7; infralabials 9-9; postoculars L3-R2; preoculars 2-2; ventrals 168; caudal pairs 68 not including tip. Measurements (in millimeters): total length 495.0; snout–vent length 375.0; tail length 119.0; head width (maximum) 8.0; body width (maximum) 9.0; eye diameter 2.5; eye to eye 5.5; eye to nostril 3.0.

The specimen, a male as verified by dissection, was collected 2 April 1972 along a temporary stream at Puyallup, Pierce County, Washington, by Donald Thomas Noviello. A note in the specimen's respective catalog entry reads: "Light mutant."

Typically, in *T. ordinoides*, the dark ground color is broken by a series of darker spots along each side, dorsolaterally; these are absent in the specimen reported herein. It is possible that preservatives have altered the coloration over the last two decades, however, the following facts indicate that the specimen probably represents the only known case of partial albinism reported heretofore for the northwestern garter snake: 1) the specimen was recognized as a "Light mutant" upon accession into the collection; 2) the author, in comparing the specimen to several hundred *T. ordinoides* available in the PSM collection from Washington, Oregon and California and live specimens, found the specimen described herein uniquely lacking in the usual melanistic markings which are visible in specimens preserved for a comparably great length of time; and 3) the presence of distinctly red eyes with a pink iris which are discernable upon close examination of the specimen.

The unusually high frequency of abnormal scalation characteristics observed among the head scales of the specimen is interesting in that the abnormalities appear concurrently in an atypically colored specimen. Furthermore, Smith and Brodie

(1982) report the typical number of ventrals occurring in *T. ordinoides* as a range of 137 to 162 and Savage (1959) states that the ventrals in that species usually number "less than 153." Brown et al. (1995) give the ventral count range as 136 to 162. In that the ventral scale count in the specimen reported herein was 168, it is apparent that an additional scalation character in the specimen can be considered to be unusual; however the number of caudal scale pairs was within the normal range of 54 to 81 given by Smith and Brodie (1982) for *T. ordinoides*. It is possible that the atypical coloration and unusual scalation characters observed in the specimen are genetically related; however, it is equally possible that environmental factors played a more dominant role in producing a specimen exhibiting such an atypical phenotype for this species (Bechtel, 1978:525).

The albino *T. ordinoides* pictured in Brown et al. (1995: 147) exhibits indications of parietal spots, laterals stripes and a mid-dorsal stripe in faint pale yellow hues; it is also apparent from the photograph that the typically black spots along the sides are represented on the specimen as indicated by distinct pink spots laterally present on the specimen where the black spots would typically appear. In both of these respects the photographed albino differs from the partial albino reported on herein.

Acknowledgments

A 1990 Murdock Research Grant provided to the author from the University of Puget Sound, Department of Biology, funded the preparation of this paper in part. The following persons and entities assisted the author during preparation of this paper: Drs. Dennis Paulson, Ernest Karlstrom and Darwin Jorgensen of the University of Puget Sound, Melisse Swartwood, Eric Durban, Adam Levi, Thomas Hassler, Delores Neher, Joanne Greene, Joan Styczinski, Walter Dolfini, Nola Chavoya and the California Cooperative Fishery Research Unit. The author especially acknowledges the generosity of the staff and director of the James R. Slater Museum of Natural History.

Literature Cited

Bechtel, H. B. 1978. Color and pattern in snakes (Reptilia, Serpentes). Journal of Herpetology 12(4):521-532.

Blanchard, F. N., and F. C. Blanchard. 1941. The inheritance of melanism in the garter snake *Thamnophis sirtalis sirtalis* (Linnaeus), and some evidence of effective autumn mating. Paper. Michigan Acad. Sci., Arts and Letters: Vol. XXVI, 1940: 177-193.

Brown, A. E. 1903. The variation of *Eutaenia* in the Pacific subregion. Proceed. Acad. Sci. Phil, Vol LV, March, Philadephia.

Brown, H. A, R. B. Bury, D. M. Darda, L. V. Diller, C. R. Peterson and R. M. Storm. 1995. Reptiles of Washington and Oregon. Seattle, WA: Seattle Audubon Society.

Carpenter, C. 1948. An erythristic *Thamnophis sirtalis sirtalis*. Herpetologica 4:211-212.

Cooper, J. 1958. Some albino reptiles and polydactylous frogs. Herpetologica 14(1):54-56.

Dyrkacz, S. 1981. Recent instances of albinism in North American amphibians and reptiles. SSAR Herp. Circ. No. 11.

Fitch, H. 1941. Geographic variation in garter snakes of the species *Thamnophis sirtalis* in the Pacific coast region of North America. American Midland Naturalist 26:570-592.

Hart, J. L. 1934. Melanistic garter snake recorded from Vancouver Island. Copeia (3):142.

Hebard, W. B. 1950. Relationships and variation in the garter snakes, genus *Thamnophis* of the Puget Sound region of Washington State. Herpetologica 6(4):97-101.

Hensley, M. 1959. Albinism in North American amphibians and reptiles. Publ. of the Mus., Michigan State Univ. 1:133-159.

Johnson, M. L. 1947. The status of the *elegans* subspecies of *Thamnophis* with description of a new subspecies from Washington State. Herpetologica 3:159-165.

Johnson, M. L., and J. R. Slater. 1949. On the validity of *Thamnophis elegans nigrescens* Johnson. Copeia (4):288.

Marvin, H. 1943. Erythristic specimens of *Thamnophis radix*. Copeia (2):127.

Logier, E. 1930. Some additional notes on melanism in *Thamnophis s. sirtalis* in Ontario. Copeia (1):20.

Mason, R., S. MacMillan, J. Whittier, R. Krohmer and W. Koonz. 1991. Life history section: population morph variation in *Thamnophis sirtalis parietalis*. Herpetological Review 22(2):61.

Norman, B. 1978. An unusual red color morph of the northwestern garter snake, *Thamnophis ordinoides*, from western Washington. Bull. Chicago Herp. Soc. 13(4):101-102.

Nussbaum, R., E. Brodie and R. Storm. 1983. Amphibians and reptiles of the Pacific Northwest. Moscow, ID: Univ. Press of Idaho.

Rose, F. 1959. Albinism in *Thamnophis sauritus*. Herpetologica 15(4):233.

Savage, J. 1959. An illustrated key to the turtles, lizards and snakes of the western United States and Canada. Revised edition. Volume 2 of the Naturegraph Pocket Keys series. Healdsburg, CA: Naturegraph Company.

Shively, S., and J. Mitchell. 1994. Life History Section: *Thamnophis sirtalis sirtalis*. Albinism. Herpetological Review 25(1):30.

Smith, H., and E. Brodie, Jr. 1982. Reptiles of North America: A guide to field indentification. Racine, WI: Western Publishing Co.

Stebbins, R. 1985. A field guide to western reptiles and amphibians. Boston: Houghton Mifflin Company.

Svihla, A. 1936. An abnormally colored garter snake. Copeia (2):111-112.

Bull. Chicago Herp. Soc. 32(5):109, 1997

Book Review: *Coral Snakes of the Americas: Biology, Identification and Venoms* by Janis A. Roze 1996. Hardback. 8½ × 11 in. Krieger Publishing Co., Malabar, Florida 32950. xii + 328 pp., 61 figs., 38 maps, 25 col. pls. ISBN 0-89464-847-0. $86

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The long-awaited appearance of a monographic treatment of the coral snakes is a truly epochal event, placing the taxonomy and natural history of these formerly enigmatic but fascinating and beautiful snakes at last on a firm foundation. At the same time it reveals to all that the author is a gentleman as well as a scholar, whose unique combination of genius, humility and humanity have always made him a treasured friend and inspiration to those who have been fortunate enough to have known him. The warmth of his personality is evident throughout this book and sets the stage for eager sharing of the spoils of his long devotion (30 years or so) to the pursuit of endless coral snake mysteries. Serendipitously, they could not have been tackled by a more appropriate sleuth than this cosmopolite who originated in Latvia and lived and worked for many years thereafter in both Latin America and the U.S., where his subjects occur. No one could have been better preadapted for the undertaking.

The exhaustive coverage provided in this book of a relatively large, multi-generic group of snakes (at least three genera, and perhaps five if Slowinski's proposals were adopted) of some 65 species and 122 species and subspecies (of which the author named 25), finds no published parallel save perhaps Klauber's classic, two-volume *Rattlesnakes*. The coral snake monograph is a classic of equal stature, smaller in size to be sure because of the lesser attention coral snakes have received, but in some ways superior in coverage.

One feature that makes this technical but widely appealing monograph rate above all others of similar nature is its outstanding artistry, evident throughout, from the colorful dust jacket to the indices. A delightful touch is the "typical" (for the U.S.) coral snake color-pattern sequence in the letters of the word "coral" on the dust jacket (black-yellow-red-yellow-black). Sixty-one black-and-white figures (mostly line drawings) are scattered throughout the text, and collected near the end of the book are 38 maps, followed by 63 color figures of actual snakes, and 49 drawings of head, body and tail patterns, also in color. Color, pattern, map and figure references are scattered marginally where appropriate throughout the text—a unique, precedent-setting system.

The exhaustive thoroughness of coverage is evident from the titles of the 16 chapters, each with several subtitles. The introductory material as a whole, of 13 chapters, occupies 119 pages, whereas chapters 14–16 on identification, description and country lists occupy only 108 pages. The terminal sections, following the maps and color plates, are similarly thorough, with, in succession, two appendices (four pages on scientific and common names of coral snakes, and on coral snake venom composition), references (22 double-column pages), acknowledgments (three pages), a list of abbreviations of museums from which material was studied (three pages), and four excellent indices, all triple-columned (personal names, on three pages; subjects, on six pages; scientific names, on five pages; and venom and snakebites, on four pages)

The introductory chapters are organized in four parts: general information (one chapter, on Old World relatives, red snakes: a New World phenomenon, history of coral snake studies, names and folklore, coral snakes as endangered animals); form and distinguishing features (two chapters, on details of external and internal anatomy); biology and evolution (six chapters, on ecology, feeding and food, reproduction, enemies and defense, mimicry and imitation fellowships, and biogeography, origin and evolution); and venom and snakebite (four chapters, on venoms in biology, studies of coral snake venoms, chemical and biological characteristics of venom, and coral snakebite accidents). All of these parts of the text are in double columns, as is most of the rest of the book.

One cannot read the introductory parts of the book without being impressed with the originality of observation and the versatility of the author, his enthusiasm for the subject, and the scholarly thoroughness of coverage. And the taxonomic sections are equally a delight with their clear-cut summaries of variational detail of each taxon, and the fine discrimination that they represent.

The book is, in summary, a superb masterpiece in every way: a model for all time.

Bull. Chicago Herp. Soc. 32(5):110, 1997

Two Husbandry Ideas Appropriate for the Technologically Impaired

Ilene Sievert

Perpetual Fruit Flies

Need:

A continuous fresh supply of nonflying small live food for suitably small frogs or lizards.

Materials:

A starter amount of adult, vestigial-wing *Drosophila melanogaster*, at least 25 flies.

Fruit fly growing-medium, commercial or homemade, and granular baking yeast.

Optional mold-retardant solution or cooled boiled water.

A plastic tub with sturdy flexible plastic lid, such as for margerine, cream cheese, or other shape broader than tall for stability. It should be well washed and rinsed.

Coffee filter, preferably unbleached.

Optional toothpicks, wood shavings, or other fly resting-surface.

Scissors, knife.

Procedure:

Cut out a large circle in the middle of your tub lid, leaving enough edge for it to snap firmly back on the tub. Put medium in tub, sprinkle with a few grains of yeast, put optional fly-resting surfaces on prepared medium.

Cut coffee filter to size larger than lid. Put filter over tub and snap on lid, trimming off excess filter material. Check comfortable tight fit of parts.

Open tub, put flies in and quickly cover and close. Let sit a couple of days at warm room temperature to give the flies time to lay eggs.

Place tub in habitat in a stable fashion where you would like to observe your animals feeding. Take a skewer or similar object and pierce one or more small holes in the filter material of a size for the flies to escape but your animals not to be entrapped. You should see some parent flies leave the tub gradually. A piece of ripe banana on a disposable container such as a plastic lid or soda cap will attract wandering flies and keep them at cage floor level.

If you are suspicious that your fly medium has dried up or molded, sneak a peek but please hold the tub over the tank or cage because flies may come boiling out in large numbers.

I have often seen animals sitting atop the tub, intently gazing at a hole, waiting for the next fly to appear. This method does not provide adequate long-term prey volume nor does it provide vitamin and mineral supplementation. It does serve for busy times or short absence of the caregiver and it keeps the animals gainfully employed.

Quick Baby Chameleon Cage

Need:

Indoor cage for neonate *Bradypodion thamnobates*. Must be proof of fruit flies and pinhead crickets, allow strong artificial light and good ventilation.

Materials:

Clear plastic aquarium type cage with snap-on, coarsely screened top in opaque plastic. Large snap door on lid can be completely removed. Found in several sizes at pet stores.

Flexible synthetic screening cloth for mending tents, "no-see-um proof," found in camping goods stores. Wash, rinsing carefully, and line dry.

Clear plastic mending tape, of the sort for patching children's blow-up toys, found in hardware and other stores.

Old unloved metal kitchen knife, small with nonserrate edge.

Kitchen stove or other burner with vent fan or open window.

Procedure:

Take lower part of cage, knife, and pot holder or protective cloth to stove. Heat the blade of the knife good and hot. Lay the cage on its side and with the hot knife, your hand protected, neatly cut a rectangular hole as large as possible, proportional to the size of the cage, without weakening it for use. You may need to reheat the blade during the process. Stinky melted plastic will burn off the blade, leaving carbon you will not want to incorporate into the cage. Wipe carefully on wad of paper towel. If edges seem too rough, smooth with hot blade. If you want you can cut additional sides according to your venting needs. Take your screen cloth and cut pieces to cover the holes with enough margins to hold half the width of your tape. Don't use skinny tape. Tape in the screen on the inside so any bumpy edges are covered smoothly and the tape is affixed to the screen and solid cage leaving the hole free. Then, using the cage lid as a template, cut a rectangle of screen cloth with generous margins to put over the opening of the top of the cage. Snap on the lid over it and trim any excess. Your cage is ready to furnish and inhabit. The screen on side and top permits misting freely and frequently without opening the top.

In my case there were many used cages available and newly screened cages were prepared when the animals needed to be separated. Also it is easiest on the animal to move it on a twig to a fresh other cage and clean the dirty cage afterwards. I use paper-towel substrate and rinsed yard-twigs. A plastic bottle cap with a round of ripe banana pressed in keeps flies and crickets refreshed. Very strong fluorescent light is used. Please remember that plastic and screening may burn or melt.

Bull. Chicago Herp. Soc. 32(5):111-112, 1997

Creatures of Habitat
Lincoln Park Zoo's New Small Mammal and Reptile House

by Jill Horwich

On Friday, May 23, Chicago's Mayor Richard Daley will join Joseph Regenstein, Jr., President of The Regenstein Foundation, David Grumhaus, Chairman of the Lincoln Park Zoo Board of Directors, and Zoo Director Kevin Bell for the grand opening of the Zoo's new small mammal and reptile building, "Creatures of Habitat."

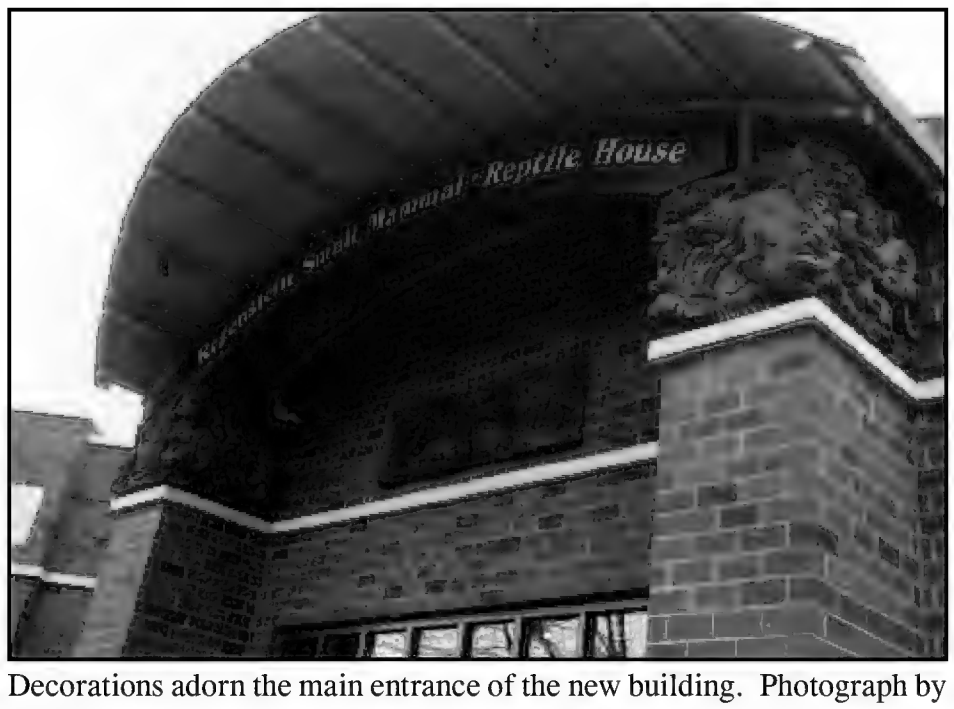
The new "Creatures of Habitat" building cost $12 million to construct, more than half of which was donated by the Regenstein Foundation. Other sources of funding were The Chicago Park District and the Public Building Commission of Chicago. The outside of the building features beautiful carved brick relief on either side of the entrance, and terra cotta tiles depicting Standing's day gecko and fennec fox. These animals are the decorative theme for the entire structure. According to Curator of Small Mammals and Reptiles, John Gramieri, who was gracious enough to give Gary Fogel, Lori King-Nava and me a tour of the new facility, the building and its exhibits "address issues of habitat and environs" rather than attempting to exhibit as many taxa as possible. It is a new approach for the zoo, more in line with modern zoo-keeping, but still familiar enough to the community it serves so as not to be intimidating.

The building is divided into two main sections, the Gallery, which comprises the Reptile Walk and the Mammal Walk, and the Ecosystem, which has exhibits representing Asia, Africa, South America and Australia, as well as a mezzanine area for treetop viewing of the zoo's koalas. There are $50,000 worth of live plants in the Ecosystem section of the building, which lies under a 45-foot-high glass dome. From the mezzanine, one has a beautiful view of the zoo's swan pond. John Gramieri hopes the view will inspire visitors to "compare and contrast the needs of exotic ecosystems with those of our own, and give some thought to our local environment." At the center of the Reptile Walk is a giant fiberglass statue of a lizard that most closely resembles Standing's day gecko resting on a leaf. A similar statue of a fennec fox occupies the center of the Mammal Walk section.

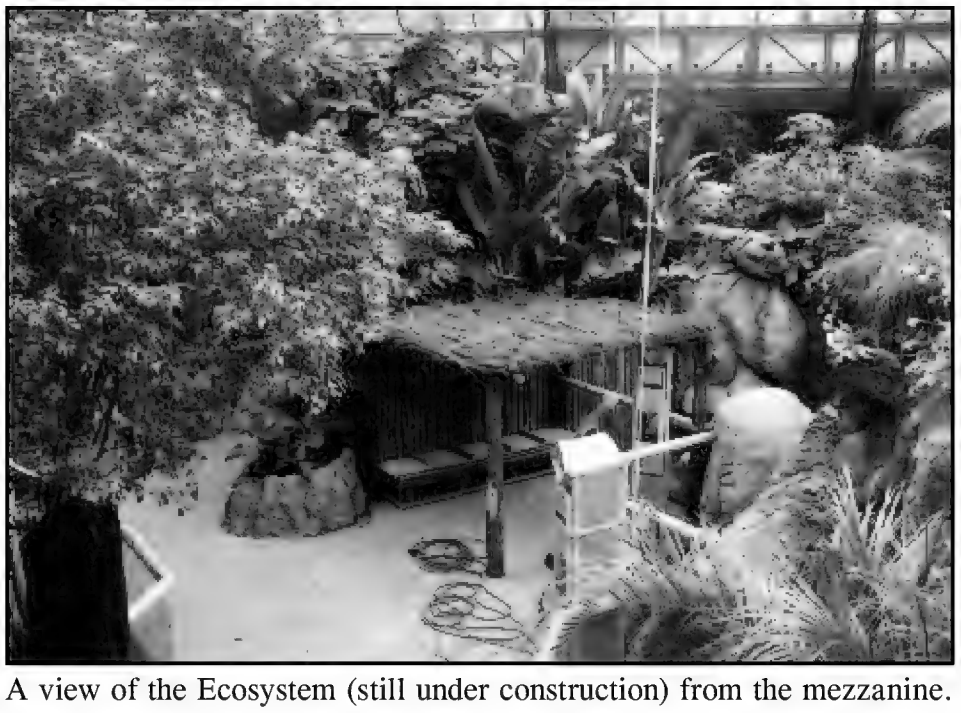
When moving from the Gallery section to the Ecosystem, visitors walk through a replica of a hollowed out African baobab tree, which houses two species of fruit bats, among other animals. Under the tree, one can see simulated eyeshine, starlight, and various animals such as hornbills, bats and bees. The building also features a 25-seat mini-theater that can be used for films, slide shows, animal handling demonstrations and other activities of that nature.

According to Patsy Benveniste, the Zoo's Director of Education, " . . . the new facility's educational programs focus on the diversity and adaptations of mammals and reptiles that help them survive in their natural habitats." John Gramieri, who held the positions of Assistant Curator of Small Mammals and Curator of Reptiles, before assuming his current post at the Zoo, said the exhibit "uses the reptile collection to talk about physical and behavioral adaptations to the environment."

The Reptile Walk begins with a series of "gem boxes," that demonstrate the increasing complexity with which animals adapt to their respective environments. The gem boxes begin with amphibians, and feature other adaptations by exhibiting species such as tree-dwelling animals and predator species. There are also exhibits about cold-bloodedness and an-nor in nature. After the gem boxes, the visitor comes to four fixed dioramas that can house anything dangerous or venomous. Each of these areas is backed by a closed room, designed with double doors and other special precautions against escape of any dangerous animals. Each diorama has its own climate control, including heating elements in the artificial rocks to induce the animals to come out and be visible to the public. The lighting in these exhibits is designed to simulate natural conditions; Vita-lites go on at 6 A.M., at 8 A.M. theatrical lights go on, and at 10 A.M. heat lamps go on. At 2 P.M. the heat lamps are turned off; then theatrical lights at 5:30 P.M. and finally, at 6:30 P.M. the Vita-lites go off. The lighting is controlled by a central computer, as are all the environmental systems in the building, but there is an override switch that can be used for emergencies or special evening events.



Decorations adorn the main entrance of the new building. Photograph by Gary Fogel.



A view of the Ecosystem (still under construction) from the mezzanine. Photograph by Gary Fogel.

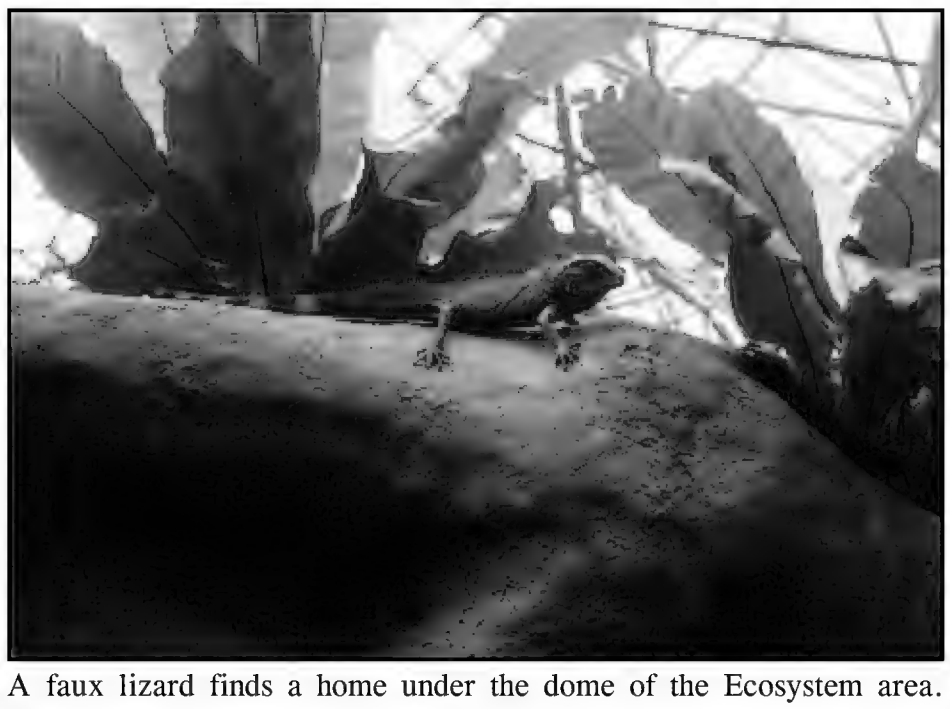
One of two large workrooms behind the scenes at the new facility. Photograph by Gary Fogel.

Other animals to watch for on the Reptile Walk are the Aruba Island rattlesnake, which John Gramieri describes as "extremely venomous but docile," the Virgin Islands boa, the Indian python, the Mexican beaded lizard (a personal favorite of mine), and the radiated tortoise.

The Mammal Walk section features a variety of interesting animals, including a brother–sister pair of golden-headed lion tamarins from Brookfield Zoo, the LaPlata three-banded armadillo, the naked mole rat, and the African crested porcupine.

The Ecosystem section of the building will comprise nine main exhibits, five with water and four without. They will represent rain forest, savanna, desert, swamp and dry forest environments, and will feature approximately 20 species of animals, including Malayan water monitors, African dwarf crocodiles, Amazon river turtles, Asian small clawed otters, Hoffman's two-toed sloths, cotton-top tamarins, koalas and ringed teals. Dry exhibit areas will include such species as young Galapagos tortoises, the short-nosed echidna and the giant anteater.

And speaking of ants, John Gramieri is planning a fabulous exhibit of leaf-cutter ants, which exhibit, we were assured, was specially designed and constructed by an ant expert to prevent the ants' escape. It was quite an elaborate undertaking.



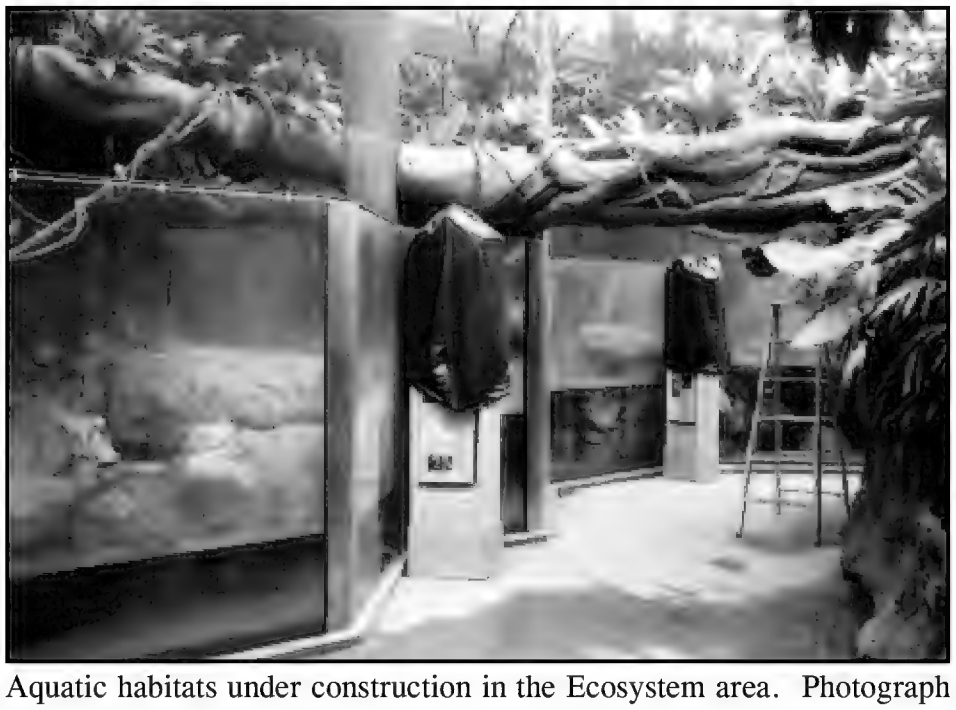
A faux lizard finds a home under the dome of the Ecosystem area. Photograph by Gary Fogel.

The entire building is climate-controlled by the Greenhouse Manager, a state-of-the-art computer system. Of course, the computer is programmed by the curator, engineers and keepers. It's housed in an office that also contains the building's blueprints and all manuals applicable to any equipment used in the building. Some of the more interesting features of Greenhouse Manager include a fog system that provides humidity in the Ecosystem, an irrigation system that waters the building's vast array of plants during the night, opening windows and retractable shades that maintain a constant temperature within the building, and a weather station on top of the building. Apparently John Gramieri has been paged at home on more than one occasion by the computer in the middle of the night during construction of the exhibits.

Behind the scenes are offices, a kitchen used for preparing food for the animals housed in the building, and two large workrooms. In addition to housing off-exhibit animals in the workrooms, the zoo also maintains a variety of U.S. Fish and Wildlife confiscations. In 1996, the Zoo took in and housed temporarily 256 animals confiscated by U.S. Fish and Wildlife. This year the number has already reached well over 100. O'Hare Airport is a major point of entry for illegally obtained or poached animals.

We were skeptical at first about the advisability of housing reptiles in the same building with small mammals. However, it's clear that a great deal of research and planning went into the design of the Creatures of Habitat. According to John Gramieri, "By exhibiting plants and animals as they coexist in the wild we are vividly illustrating the interconnectedness of the world. We hope our visitors will take the next, natural step, which is the realization of the enormous impact humans have on their environment and the potential for a harmonious coexistence."

Creatures of Habitat is the zoo's first newly constructed exhibit since 1989. "The City is proud to support this new exhibit, which continues the zoo's 129-year tradition of providing Chicagoans a wildlife oasis right in the heart of the City," said Mayor Richard Daley. We at the Chicago Herpetological Society look forward to seeing the building once the animals are on exhibit. I encourage everyone to stop by this summer and take a look.



Aquatic habitats under construction in the Ecosystem area. Photograph by Gary Fogel

Bull. Chicago Herp. Soc. 32(5):113-114, 1997

HerPET-POURRI

by Ellin Beltz

Old Business

• "[The] New Mexico bill to authorize the state to regulate commercial use of amphibians and reptiles died in the Senate after passing the House. Never came up for a vote—it was still awaiting consideration when the '97 legislative session ended week before last. Maybe next time . . ." [from James N. Stuart <stuartjn@unm.edu> March 31, 1997]

• ". . . stocking Sierra Nevada lakes with hatchery trout could cause the ESA listing of the mountain yellow-legged frog, reports Greenwire from the *Los Angeles Times*. The frogs were once found in half of Sierra Nevada lakes but now exist in only 3%, which some biologists attribute to the 'voracious' introduced trout." [from Roger Featherstone <rfeather@clark.net> April 20, 1997]

Salamanders win court case!

"A federal judge ruled that the decision of Interior Secretary Bruce Babbitt to withdraw the proposed listing of the Barton Springs Salamander under the ESA was "arbitrary and capricious" and ordered Babbitt to make a new ruling on the listing within 30 days. A release from Save Our Springs, the plaintiff in the case, said that Judge Lucius Bunton found that it was improper for Babbitt to withdraw the listing based on a conservation agreement between the FWS and various Texas state agencies. Bunton noted that "strong political pressure was applied" to Babbitt and "political lobbyists for the development community worked with political appointees of the Secretary." For more information, contact Bill Bunch, Save Our Springs, <bbunch@bga.com>." Copies of the court's opinion from the Southeast/Texas field office at 1104 Nueces, Ste. 3, Austin, TX 78701-2128. [from Roger Featherstone <rfeather@clark.net> March 26, 1997]

More Galapagos violence

March 27, 1997: The World Wide Fund for Nature called on the Ecuadorean government to guarantee the rule of law and the safety of personnel and researchers in the Galapagos Islands, after a National Park employee was shot in the stomach following a week of unrest due to a government crackdown on illegal sea cucumber harvesting. . . . The attack follows a series of incidents that have tarnished the image of Ecuador's main tourist attraction in recent times. . . . One of the world's most renowned natural protected areas and a UNESCO World Heritage Site, the Galapagos Islands have been in a state of undeclared emergency ever since the Ecuadorean government abolished . . . fishing around the wildlife-rich islands early in 1995, after a legal sea cucumber harvesting trial quota was repeatedly violated by hundreds of boats lured from the mainland by the creatures' high international market price. Following the decision, groups of the angry newcomers reacted by holding staff from the Charles Darwin Research Station and National Park personnel hostage for several days. "It is in the best interest of Ecuador to ensure that the law enforcement situation in the islands improves," warned Miguel Pellerano, Galapagos Coordinator for WWF. "Conservation activities cannot take place when the well-being of the people working in the field is constantly under threat. And without conservation there won't be much of Galapagos left to show the world in a few years time." In the meantime, Galapagos National Park Director Eliecer Cruz vows to pursue legal actions against Lopez's attackers. "The National Park rejects the violent demeanor of the illegal fishermen and we ask the National government to act in order to guarantee that we'll be able to carry out our conservation activities in Galapagos in all safety." For more information, contact Javier Arreaza, WWF, +41 22 364 9550.

Terrestrial tortoises stolen

On behalf of Mr. John Spence, Director of the Tygerberg Zoopark, Kraaifontein, South Africa, I am reporting a theft of terrestrial tortoises from the well-established terrestrial tortoise breeding group at Tygerberg Zoo. Some 10 animals were removed, presumably during the weekend of March 28-30. The species involved are as follows: *Psammobates geometricus* (1 male and 3 females, one of which carries eggs); *Testudo radiata* (1); *Homopus signatus signatus* (1); *Homopus femoralis* (1); *Kinixys spekii* (2); *Kinixys lobatsiana* (1). The animals were removed from a chain-link fenced enclosure situated next to the director's residence (in an attempt to prevent theft!!). No visitors to the zoo are allowed inside the enclosure, and the curator of reptiles, Ms. Tamara Harris-Smith, only handles tortoises on special request for photographs. . . . [Please] be on the look-out for any of the above animals, and to post this message to other interested colleagues. I will try and stay abreast of developments in this regard and post any information. Kind regards. Dr. Ernst H. W. Baard, Cape Nature Conservation, Private Bag 5014, Stellenbosch 7599 South Africa <baarde@cncjnk.wcape.gov.za> Fax: +21-8871606. April 4, 1997.

Two new Web Sites

• Check out the new Kansas Herpetological Society Home Page: <http://vmsweb.selu.edu/~pbio4888/khsmain.html>. [April 8, 1997, from Joe Collins]

• . . . Westward Frog, a new web page dedicated to the Conservation of Western Amphibians <http://ice.ucdavis.edu/Toads/wwfrog.html> with a capital "T" in "Toads." The page has: a multimedia tour of California species (images, sounds, range maps and for some species detailed species notes); threats to amphibians (articles and reviews including articles on grazing and amphibians, urban streams, UV-B radiation and more); sampling techniques and field guides (listings and bibliographies); expert contact list (names and addresses of experts for all California herps); educational materials (resources for teachers—all levels); and links to related sites. Westward Frog was created by Carlos Davidson and Lara Hansen of the University of California, Davis, Amy Lind of the U.S. Forest Service Redwood Sciences Lab, and Chris Gregory of the California Department of Fish and Game. [April 11, 1997 <cdavidson@ucdavis.edu>]

Beam me down, Scotty!
The Associated Press reports that European scientists from England and Holland claim to have successfully floated a frog in air and propose that later larger animals may defy gravity as well. One of the researchers said, "It's perfectly feasible if you have a large enough magnetic field." The magnetic field necessary to float the frog was a million times as strong as the magnetic field of Earth. AP concludes, "The scientists said their frog showed no signs of distress after floating in the air inside a magnetic cylinder." [AP-NY 04-12-97, from Allen Salzberg] Kudos to the first contributor to find this in *New Scientist*. What do you want to bet the frog looks pretty green after an experience like that?

Turtle conservation groups recognized
Three turtle conservation groups were awarded the J. Paul Getty Wildlife Conservation Award in Quezon City, Philippines, the World Wildlife Fund [WWF] announced today. The $50,000 prize—administered annually by WWF—is one of the leading awards given for outstanding achievement in the conservation of wildlife and its habitats. This year's winners—Brazil's Fundacao Pro-TAMAR, the Philippines' Pawikan Conservation Project, and Malaysia's Sabah Parks—developed innovative approaches to protecting threatened sea turtles and their nesting habitats. "Through their multifaceted approaches, each of these groups have made marine turtle conservation part of the fabric of national life and national policy in their countries," said WWF President Kathryn Fuller. "This is the kind of effort necessary to ensure these magnificent creatures swim safely into the next century."

• Brazil's Fundacão Pro-TAMAR (the Brazilian Marine Turtle Foundation) helped create a turtle conservation area that stretches along more than 600 miles of Brazilian coast, sheltering vital turtle breeding sites.

• The Philippines' Pawikan Conservation Project establishes turtle sanctuaries, and recently convened a symposium on marine turtle conservation that brought together sea turtle specialists from throughout Southeast Asia.

• Malaysia's Sabah Parks has released more than 4 million turtle hatchlings into the wild over the last 15 years and helped designate the nine islands of the Turtle Islands as a single protected unit. The group manages the 4,300-acre marine protected area known as Turtle Islands Park, which embraces three of the Turtle Islands.

Sea turtle populations worldwide face an uncertain future due to extensive hunting for their shells, meat, and hides. All sea turtle products—from tortoise shell jewelry to stuffed tortoises, tortoise eggs and soup—are prohibited items for trade. The Getty Prize, which was created in 1974 by the late J. Paul Getty, will be split among the three turtle conservation groups, with $25,000 going to the Brazilian project and $12,500 going to each of the Asian turtle projects. Past winners include Dr. Jane Goodall, Sir Peter Scott, and the guards who protected Rwanda's mountain gorillas during the country's recent civil war. For more information, contact Gillian Haggerty, WWF, (202) 778-9647 or <www.wwf.org>. [Environmental News Network, April 25, 1997, from Allen Salzberg]

Thanks to this month's contributors! And to everyone who has mailed a clipping in the last month or so—you'll see your contributions next month. Please keep the articles, cards, letters, vacation photos, and so on coming! All contributions are acknowledged here. Mail to: Ellin Beltz, 1647 N. Clybourn Avenue, Chicago, Illinois 60614-5507. Letters only to e-mail; please note new address <E-Beltz@neiu.edu>.

Unofficial Minutes of the CHS Board Meeting, April 18, 1997

The meeting was called to order at 7:32 P.M. President Steve Spitzer was absent.

Officers' Reports

The minutes of the March board meeting were read, corrected and accepted.

The Treasurer's Report was reviewed and approved.

Current CHS membership is 1,242. John Driscoll announced the formation of a membership committee, consisting of John, Gary Kostka, Gino Martinez, Audrey Vanderlinden and Lori King-Nava. Anyone else interested should contact John. The first meeting was scheduled for 7:30 P.M., Friday, May 9, at Audrey Vanderlinden's.

Committee Reports

1997 ReptileFest: Lori King-Nava distributed written reports on the progress of the show. There will be only one more ReptileFest committee meeting prior to the show.

Library: Jenny Picciola reports that all newly purchased books will be catalogued and ready for circulation by the April 23 general meeting.

Shows: Jenny Vollman will send out info to those representing the CHS at the Field Museum's Members' Nights. The Little Red Schoolhouse will hold an Environmental Awareness Expo on June 8, noon – 4 P.M. Anyone interested in helping should talk to Jenny. Kara Tourville or another Chicago Academy of Sciences representative will speak at an upcoming CHS meeting about the importance of the HerPETological Weekend put on each year by the CHS in conjunction with the Academy.

Raffle: Jenny Picciola has sent out 62 letters to companies to solicit items for our raffle. Also, Jack Schoenfelder has drafted a letter to be sent to corporate or individual donors, acknowledging donations to the CHS.

Grants: Dottie Humbert has received one grant proposal so

far. May 1 is the deadline for proposals to be received.

Old Business

Website: Jenny Picciola has created a website for the CHS. The Internet address is <http://orion.it.luc.edu/~jpiccio/>.

Book inventory: Ron Humbert received by fax a written proposal from Chris Matthews and Dave Smiskol to maintain the CHS book sales operations. The board will get copies of the proposal and discuss it at the next board meeting.

New Business

Ron Humbert announced that he had received information on the "Windy City Pet Expo," to be held at McCormick Place October 11–12. The CHS has been offered space at this event. The consensus of the board was that we should participate.

Round Table

Gary Fogel reported that a CHS contribution of $100 was sent to Dr. Gery Herrmann to help fund the scholarship that goes with the 1997 Illinois Reptile and Amphibian Medicine Award.

Mike Dloogatch reported that the Field Museum will have a special exhibit on dinosaur eggs this summer. For comparison purposes they would like some dried, hatched-out snake eggs to display. Anyone who has some to donate can call Mike at (773) 588-0728.

Ron Humbert informed the board that it is time to renew our liability insurance. He will proceed with this.

Audrey Vanderlinden thanked Jennie Picciola for her work on a CHS website and for her efforts soliciting raffle donations.

Jack Schoenfelder, on behalf of the CHS, wished past president Chris Lechowicz a speedy recovery from his emergency appendectomy and congratulated current president Steve Spitzer on his 25th wedding anniversary.

The meeting adjourned at 9:00 P.M.

Respectfully submitted by the Recording Secretary
Audrey Vanderlinden

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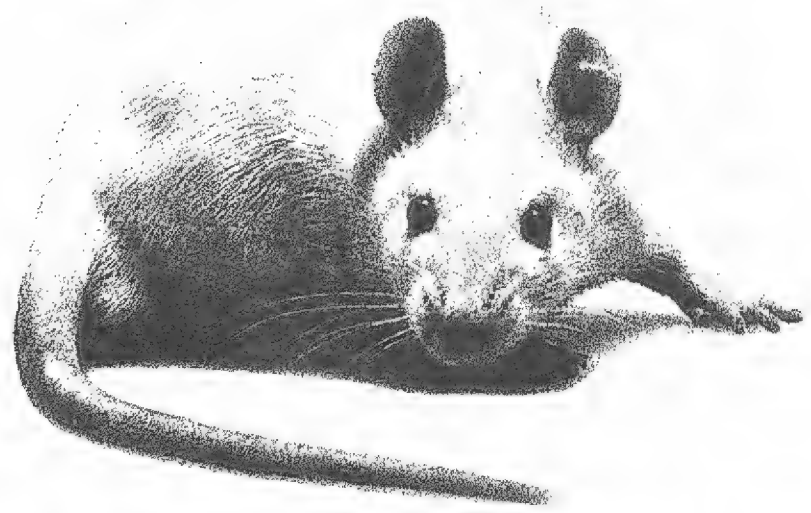
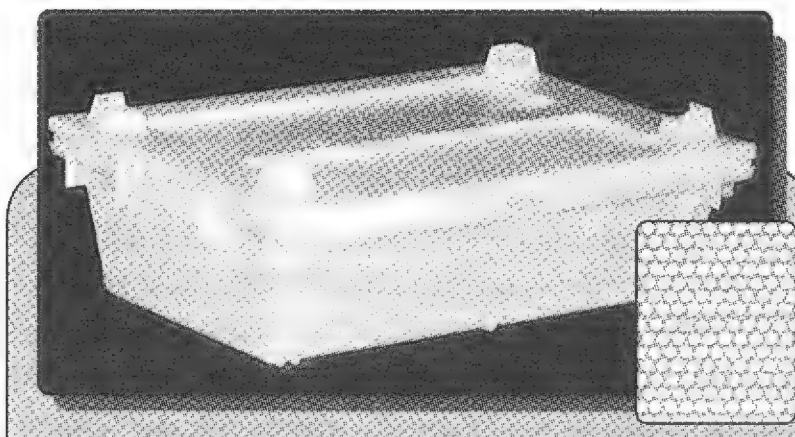


Highest quality rodents are available in all sizes from pink mice to jumbo rats. Fresh frozen crawler mice are only 17¢ each in lots of 2,000. All frozen animals are shipped in insulated boxes.



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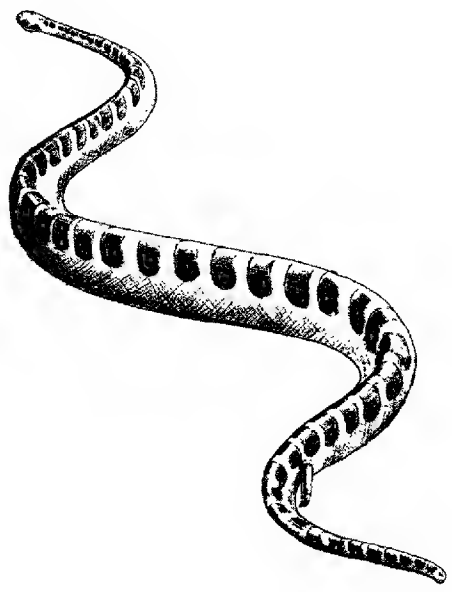
Bull. Chicago Herp. Soc. 32(5):116-117, 1997

Herpetology 1997

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

UPON THY BELLY SHALT THOU GO— A PRIMITIVE SNAKE WITH LEGS

M. W. Caldwell and M. S. Y. Lee [1997, Nature 386:705-709] restudied the two known specimens of the mid-Cretaceous squamate, *Pachyrhachis problematicus*. The specimens were found in limestone quarries at Ein Jabrud, 20 km north of Jerusalem, Israel. They were originally described by George Haas, almost 20 years ago, as varanoid lizards. Caldwell and Lee note that the small, narrow, lightly-built skull of *Pachyrhachis* had many characteristics found only in snakes. The braincase is fully enclosed in bone; the rest of the skull is highly kinetic. Also the vertebrae are highly snakelike. They maintain that their reexamination provides compelling evidence that *Pachyrhachis* is actually a primitive snake with a well-developed pelvis and hindlimbs, and is the sister-taxon of all other snakes. Furthermore, *Pachyrhachis* is marine—both specimens having been found fully articulated in marine limestones. The authors also note that in *Pachyrhachis* two of the anklebones, the astragalus and the calcaneum, are separate. Among other squamates that possess ankles, these two bones are separate only in the mosasauroids (Cretaceous marine lizards such as aigialosaurs, mosasaurs and coniasaurs). Based on this characteristic and several other shared traits, the authors suggest that, among lizards, the marine mosasauroids are the nearest relatives ("ancestors") of snakes.



REPRODUCTIVE SYNCHRONY IN KEMP'S RIDLEYS

P. T. Plotkin et al. [1997, J. Herpetology 31(1):17-22] studied the reproductive behavior and movements of arribada nesting olive ridley turtles (*Lepidochelys olivacea*) during the 1990 and 1991 nesting seasons (September–November) at Nancite Beach, Santa Rosa National Park, Guanacaste, Costa Rica. Females that normally emerge synchronously once a month on Nancite Beach to oviposit delayed oviposition in response to a period of very heavy rainfall. Females retained oviducal eggs for 63 days and emerged synchronously to oviposit at Nancite Beach after the rain had ceased. Egg retention in *L. olivacea* appears to be an adaptation that enables delayed oviposition when environmental conditions are unsuitable and may also facilitate reproductive synchrony. The authors suggest that preovipositional arrest of developing embryos may have occurred while oviducal eggs were retained.

RED-BACKED SALAMANDER TERRITORY MARKING

R. R. Simons et al. [1997, Copeia (1):70-76] note that the terrestrial red-backed salamander (*Plethodon cinereus*) scent marks territories on forest floors of eastern North America. The function of such scent marks is not well understood; thus, the authors conducted an experiment to test a series of hypotheses previously derived for scent marking by mammals. They allowed intruding male salamanders to confront territorial male residents under two conditions in the laboratory: (1) the intruder could move within the marked boundaries of the resident; and (2) the intruder could move outside of those boundaries on a substratum previously marked by a nonresident conspecific male. They found that intruders approached residents in both conditions, that residents resorted to significantly more threat behavior and significantly more nose-tapping (scent-mark sampling) in condition 1, and that intruders significantly increased their rates of gular pumping (sampling airborne odors?) in condition 1. From the results of this and previous experiments, The authors pose a preliminary hypothesis for the function of territorial scent marks by *P. cinereus*. Such scent marks have little effect on repelling or intimidating intruders. They are important to the resident in identifying his defended area, provide information to intruders about the status (e.g., size) of the resident, and probably allow the intruder to identify correctly the resident (as compared to other simultaneous intruders). Thus, scent marking appears to function primarily in providing information to both resident and intruder that can be used in their decisions concerning subsequent aggressive and submissive interactions.

TWO NEW CENTROLENID FROG SPECIES

J. R. McCranie and L. D. Wilson [1997, J. Herpetology 31(1):10-16] describe two new species of glass frogs, *Hyalinobatrachium cardiacalyptum* and *H. crybetes*, from eastern Honduras. *H. cardiacalyptum* is distinguished from all other Mexican and Central American species of the genus, except for *H. chirripoi*, by having extensive webbing between fingers II–III and a clear parietal pericardium. This taxon is most easily distinguished from *H. chirripoi* by having smooth to weakly granular dorsal surfaces, a faintly indicated tympanum, a short loreal region, nonprotuberant eyes, and numerous brown flecks on the dorsal surfaces. The specific name translates as "uncovered heart" and alludes to the heart being visible in life through its transparent parietal pericardium. *H. crybetes* is distinguished from all other Mexican and Central American species of the genus by the combination of having a clear parietal pericardium, vestigial webbing between fingers II–III, a faintly indicated tympanum, and by lacking brown flecks on the dorsal surfaces in alcohol-preserved specimens. The name *crybetes* means "one hidden" and refers to the type specimens being "hidden" under the name *fleischmanni* since 1967.

ENERGY FOR COLD-WEATHER-BREEDING FROGS

K. D. Wells and C. R. Bevier [1997, Herpetologica 53(1):70-80] investigated nightly and seasonal variation in trunk-muscle and liver glycogen stores in males of two species of frogs that breed in cold weather, the wood frog (*Rana sylvatica*) and the spring peeper (*Pseudacris crucifer*). Wood frogs have an explosive breeding period that begins soon after ice clears from their breeding ponds and lasts only 3–5 days. Males call at low rates (500–600 call notes/h) and move about the pond in search of females. They began the breeding season with large glycogen reserves in their trunk muscles (1422 mg/g), but these were significantly depleted by the end of the breeding period. Males collected late in the evening consistently had lower trunk muscle glycogen reserves than those collected early in the evening. Liver glycogen stores were unchanged on either a nightly or seasonal basis. Wood frogs do not feed during the breeding season and cannot replenish depleted glycogen reserves. They also lack substantial lipid reserves and appear to depend entirely on carbohydrates to support call production and other reproductive activities. Spring peepers begin breeding at about the same time as wood frogs, but they continue for up to two months. Males call at very high rates (3000–4000 call notes/h) for several hours each night. They began the season with very little glycogen in the trunk muscles (2 mg/g), but the muscles have enormous stores of lipids. Glycogen contents of both trunk muscles and liver increased late in the season when the frogs began to feed, but also were depleted on some nights when males were calling. Spring peepers derive approximately 90% of their energy for call production from lipid reserves and only 10% from glycogen. This pattern is similar to that seen in other frogs with very high calling rates.

SNAKE HEAD–BODY TEMPERATURE DIFFERENCES

M. E. Dorcas and C. R. Peterson [1997, J. Herpetology 31(1): 87-93] note that although most studies of reptilian thermal biology have measured body temperature from a single location in an animal, the presence of regional temperature differences within the bodies of reptiles should be considered when conducting detailed studies of their thermal biology. As part of an extensive study of rubber boa (*Charina bottae*) thermal biology, the authors measured the oral and cloacal temperatures of 45 free-ranging rubber boas from June 1990 to August 1995. They used oral temperature as an indicator of head temperature and cloacal temperature as an indicator of body temperature. Oral temperatures ranged from 13.8°C to 32.2°C and cloacal temperatures ranged from 11.5°C to 34.5°C. During the daytime, rubber boas generally exhibited warmer heads at average body temperatures below their thermal preference (thermal preference = 27.4°C) and cooler heads at average body temperatures above their thermal preference. At night, active rubber boas exhibited significantly higher head temperatures than body temperatures (mean difference = 2.0°C). This study represents the first report of regional body temperature differences exhibited by a reptile during nocturnal activity and supports the generalization that head temperature in reptiles is maintained within more narrow limits than body temperature during the day.

REPRODUCTIVE BEHAVIOR IN BROAD-HEADED SKINKS

W. E. Cooper, Jr., and L. J. Vitt [1997, Amphibia–Reptilia 18(1):59-73] report that several lines of evidence suggest that male *Eumeces laticeps* may increase reproductive success by 1) mating with larger females to increase clutch size, 2) mate-guarding to be present during the female's receptive period and/or prevent sperm competition, and 3) engaging in extra-pair copulations. Clutch size increases with female body size, establishing a potential advantage of male preference for large female mates. Mate association lasts up to 8 days and possibly longer, with a mean of nearly 5 days. Males may remain with females during a major portion of the mating season, which preliminary data suggest lasts about two weeks, suggesting that mate-guarding may reduce the level of polygyny. Tethered introductions of intruder males to consort pairs showed that consort males use aggressive behavior to exclude other males from the vicinity of females. *Eumeces laticeps* exhibits strong positive size-assortative pairing, suggesting the possible importance of male choice of large mates. Female preference for large males could account for this relationship, but only if large females prefer the largest possible males within the acceptable size range and aggressively exclude other females from preferred males. Females are sometimes aggressive to each other, especially near nest sites, but aggression is suppressed by males, as shown by tethered introduction of females to consort pairs. Size-assortative pairing may be based in part on male preference if males can prevent larger females from aggressively excluding smaller ones. In addition to preferentially guarding large females, males not currently guarding mate with any females not large enough to deter them aggressively. A field observation of an extra-pair copulation, responses by consort males to introduced females, and the lack of size preference in the absence of consorts suggest that males may engage opportunistically in extra-pair copulations to increase reproductive success and are not then choosy about female size.

Advertisements

American Federation of Herpetoculturists: A nonprofit national membership organization of herpetoculturists, veterinarians, academicians and zoo personnel involved in the captive husbandry and propagation of amphibians and reptiles. Membership includes highly acclaimed magazine, *The Vivarium*, dedicated to dissemination of information on herpetocultural accomplishments, herp medicine, breeding and maintenance, field studies and adventures, enclosure design and much more. AFH membership is $26. Send information requests to: AFH-News, P.O. Box 300067, Escondido CA 92030-0067.

For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, 6115 SW 137th Avenue, Archer FL 32618, (352) 495-9024, E-mail <GrmtRodent@aol.com>.

For sale: murine-pathogen-free rats and mice available in all sizes, live or frozen: pinkies, fuzzies, crawlers, small, medium and large. Frozen crawler mice in lots of 2000, $.17 each. Also available, full grown hairless mice. FOB shipping point. Master Card accepted. Call (518) 537-2000 between 8:00 A.M. and 5:00 P.M. or write SAS Corporation, 273 Hover Avenue, Germantown NY 12526 for prices and additional information.

For sale: high quality feeder mice. Shipped UPS Next Day Air. All mice are properly processed to insure a quality product. Fourth year of production and supply of frozen feeder mice. Prices: pinks, $25/100; fuzzies, $30/100; weanlings, $35/100. Also available are 4 oz.+ rats, $100/100. Quantity discounts available. The Mouse Factory, P.O. Box 85, Alpine TX 79831, (915) 837-7100, Ray Queen.

For sale: from Bayou Rodents, excellent quality feeder mice and rats. Every size available. Pinks starting at $20/100. Orders are shipped by overnight service Monday thru Thursday. We accept Visa, MasterCard and Discover. For more info, contact Rhonda or Peggy, (800) 722-6102.

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For sale: In stock, Flex-watt and Ultra-therm heating products. **Frozen rodents** always available. Mice: pinks–crawlers, 3/$1; weanlings, 40¢; subadult, 50¢; adults, 65¢; large adults, 75¢. Rats: small, 85¢–$1; medium, $1.25–2.00; large, $2.25–2.75; jumbo, 3/$10. Call on quantity discounts [note: discount on orders picked up at CHS meetings]. Live rodents available at higher prices. **Available now**: newsletter/catalog—many unique/hard-to-find herp husbandry items. Send business-size SASE for catalog, or call. Scott J. Michaels, D.V.M, Serpent City, P.O. Box 657, Island Lake IL 60042, (815) 363-0290.

For Sale: **Reptile D-lights.** Our 8% is the first and only fluorescent light bulb that duplicates the UV-B output of the sun while having an excellent color rendition (CRI 91). Let your reptile make *exactly* the right amount of vitamin D. Stop under- or overdosing with all those powders. A must-have for iguanas, uromastyx, bearded dragons and all diurnal basking lizards. Get yours now! Available in 18", 24", 36", 48". $34.95 each plus shipping. In California please add 7.75% sales tax. Dealer inquiries invited. Scott Solar (909) 627-3274; 9 – 9 Pacific Time or; Reptek@aol.com anytime. For Animal Use Only.

For sale: handcrafted miniature cartoon-like sculptures of any herp. Refrigerator magnets, desk ornaments, paperweights, earrings, pins etc. You name it—I'll make it. Prices vary. Dave Golde, (847) 679-1530.

For sale: April 1997 release. *Captive Husbandry and Propagation of the Boa Constrictors and Related Boas* by David Fogel (Krieger Publishing). The most comprehensive volume on the subject. All major captive care considerations are addressed allowing the keeper of any boa species to provide for, and poosibly breed their captives. Comprehensive chapters on heating devices and their application to herpetoculture, and designing a herp room will be extremely beneficial for everyone maintaining any species of reptiles or amphibians in captivity, as well as the boa keeper. Hard cover with dust jacket, 60 color and 14 b&w photographs, over 100 pages. Signed or personally inscribed (provide instructions with order) copies are available from the author for $33.50 each plus shipping ($2.50 for the first copy and $1 each additional copy). Send money order or check to: David Fogel, The Herp House, 1750 Haines Road, Orwell OH 44076, (216) 685-4615 phone, (216) 685-4572 fax.

For sale: *TURTLES*, the critically acclaimed book by Anita Baskin-Salzberg and Allen Salzberg. Only $20, postage and shipping included. This is the book "Herp Review" as well as "Chelonian Conservation and Biology" called one of the most accurate and beautiful on turtles for children to come along for a long time. If not for you, or your child, consider donating *Turtles* to your local school or children's library. It's tax deductible. Just send your check to A. Salzberg, 67-87 Booth Street -5B, Forest Hills, NY 11375. We'll autograph it upon request.

For sale: **Reptile cage plans**. Finally, an easy and inexpensive way to build your own cages. Choose from four different plan sizes. Small (24 × 24 × 24), Medium (48 × 24 × 24), Large (48 × 24 × 36), or Extra-large (72 × 24 × 36). Based on width × depth × height (in inches). Each set of plans comes with complete instructions, parts list, detailed assembly instructions, and a figure of a completed cage. Plans are $8 each, or all four plans for $24. Also available, electric line thermostats. Easy to use and install. Takes minutes and installs directly into the electric line that feeds your heat lamp. Only $30. Please mail orders to Tait Kjellberg, P.O. Box 72087, Davis CA 95617.

For sale: three 4' Neodesha cages with metal rack to fit all three, great shape, $500 or best offer. Pick-up only. Joe, (708) 450-1614

For sale: 180-gal tank, stand, hood w/ Vita-lites, 350 Magnum pump, heater, $400; 55-gal tank, stand, hood w/ Vita-lites, ceramic heater, hot rock, $100. (630) 232-7367.

For sale: available now! **Tortoises:** Aldabras, 3–4" captive hatched; redfoots, beauties, $125 each. **Boas/pythons:** young adults/adults. Three male and three female Children's, reddish desert phase, females *gravid* and have produced 11–20 eggs each in the past; two male and one female Australian olives, 10–12', adults, proven breeders, $1500/trio; two male and one female Mardarin *Sanzinia*, males 6–7', female 8–9' and approx. 20 lbs., with CITES, $5500/trio; one male and one female Bolivian redtails (*amarali*), 6–7', nice, heavy-bodied, proven breeder, $2750/pair; two male and one female Hog Island boas, proven breeder male has fathered eight litters in the past few years, the remaining pair are subadults, $1000/trio; two male and two female rough-scaled sand boas, adults, beauties, both females probably gravid, $300/pair; two male and two female Amazon emerald tree boas, nice markings and color, long-term captives, $2500 each; one male and one female green tree pythons, nice light green, light blue and white, adults raised from young, $900/pair. Dick Goergen, P.O. Box 225, Alden NY 14004, (716) 681-4518.

For sale: 10" alligator snapping turtle with tank and filter, $100 [permit needed in Illinois]. (708) 652-2686.

For sale: captive-bred panther chameleons (*Chameleo pardalis*), juveniles (up to 6 months old) and hatchlings available, two color phases (Ambanja blues and reds) available, extremely healthy offspring from gorgeous parents, Ambanja blues $100 & up, red phase, $75. Quantity discounts available. Brian, (414) 672-4211. [WI]

For sale: c.b. '96 chuckwallas, beautiful, flawless, $75 each. Richard, (864) 656-3625 (W) or (864) 654-1573 (H); E-mail <rrmnt@clemson.edu>. [SC]

For sale: spiny-tailed monitors (*Varanus acanthurus*), well-started hatchlings from unrelated parents—some sexed, $400 and up depending on age and quantity; high pink Dumeril's boas, $800 per trio (1 male, 2 females); several pairs of diamond pythons, 1996 hatchlings from outstanding San Diego Zoo stock; average to nice "96" jungle carpet pythons, $500/pair; well-started banded and whiteline fat-tailed geckos; leucistic leopard geckos due to start hatching the first of May. Eric Skov, HC60, Box 175, Wells NV 89835, (702) 752-3909.

Advertisements (cont'd)

For sale: c.b. reptiles. Adult male northern blue-tongue skink, $250; two adult male bearded dragons, c.b. '94, $125; two adult male leopard geckos, c.b. '94, $65; five hatchling Malagasy ground geckos (*Paroedura pictus*), $15; juvenile African fat-tail gecko, c.b. '96, $30; 4–5' male Brazilian rainbow boa, $350; four desert phase California kings, c.b. '96, $30; one male and two female Everglades rat snakes, c.b. '96 from awesome adults, $25. Eric Chung, (305) 279-1197. [Miami FL]

For sale: captive-bred snakes, lizards, tortoises, and amphibians. Prospective births and hatchlings include: leopard geckos, Jackson's chameleons, carpet chameleons, African spurred tortoises, rat snakes, king snakes, milksnakes, black and northern pine snakes, western hognose snakes (permit needed in Illinois), African house snakes, spotted pythons, Macklot's pythons, Colombian boas, Brazilian rainbow boas. Also feeder mice available in quantities with rats coming soon. Send SASE for current price list or call/fax (903)693-3379 or E-mail <bobball@panola.cc.tx.us> R. L. Ball, 226 N. St. Mary Street, Carthage, TX 75633.

For sale: c.b. javelin sand boas, *Eryx jaculus*. Scott, (630) 483-7670.

For sale: five male and seven female viper boas, nice colors, ltc '96, $200/pair; one male and one female clouded boas (*nebulosus*), c.b. '90, unrelated breeders, $2000/pair; one male and one female Cape York spotted pythons, c.b. '93, unrelated breeders—zoo stock, nice yellow and black, $800/pair; two male and one female Argentine boas, c.b. '92, nice black & whites, $1200/trio; female Guyanan redtail, c.b. '91, this animal is gorgeous, $450; twenty male and twenty female baby ball pythons, c.b .'97, hand-picked for high yellow and gold, absolutely the best out there, $50 each. Contact for free list: Jerry Conway, 7154 N. University Drive, #102, Tamarac FL 33321, (954) 722-8758.

For sale: electric jungles! (*Morelia spilotes cheynei*). I have hatchlings expected in mid-June from incredibly bright yellow and deep rich black, premium parents. These will be gorgeous! Call now to reserve yours. Bob, (630) 307-0879.

For sale: jungle carpet pythons, *Morelia spilotes cheynei*, beautiful yellow on velvet black, babies hatching soon. Also, Borneo blood pythons, Argentine boas, bluetongue skinks. Bill Montgomery, P.O. Box 656, Elgin TX 78621, (512) 285-5520 (days), (512) 285-9631 (eves) or E-mail <tiliqua@aol.com>

For sale: one male and one female diamond pythons, c.b. '96, getting prettier each shed, $4400/pair; one male and one female anerythristic Honduran milksnakes, lavender and white, $1500/pair; two male and two female Isabel Island boas, long term captives, very pretty, white/black or white/red, $300/pair; one male and two female Hog Island boas, c.b. '96 (Wendling/Sears stock), very light and colorful, $250 each; one male and one female Queensland carpets, c.b. '96, unrelated, nice contrast/color, $250/pair; one female albino Kenyan sand boa, c.b. 11/96, bright orange, $1000. Expecting knob-tailed geckos (*Nephrurus laevis*) May/June '97 from beautiful red parents, $1000 each, $1750/two. Phone/fax (619) 265-7557. [San Diego]

For sale: one male and two female c.r. 3-year-old Papuan olive pythons, 7–8', flawless, ready to breed next year, $950 o.b.o.; male c.b. 3-year-old bar-necked amethystine python, $200, or will sell with the Papuans for $100 o.b.o.; one c.b. '96 Sulawesi reticulated python, 5', beautiful, would like to sell with either the ametystine or the Papuans due to shipping; breeding group of Kenya sand boas, inexpensive if I'm able to ship with any of the others. I will pay the shipping if I can sell the entire group together. Must sell as I am no longer able to care for them. Jay Veltkamp, 160 River Plantation Road, Crawfordville FL 32327, (904) 925-6949.

For sale: **Chondros, Chondros, Chondros!** Ophiological Services is ready to provide you with your own captive-born green tree python from the world's largest and most diversified genetic collection of green tree pythons, second to none. All animals are very well established with data cards, genealogy charts, and scientific reprints. Available for sale are babies, juveniles and 1–2 year olds. Other pythons, boas and colubrids available. Eugene Bessette, (352) 495-3075 phone, (352) 495-2952 fax, (Archer FL). We accept Visa and MasterCard.

For sale: 1997 hatchlings. Trans-Pecos rat snakes, Mexican hognose [permit needed in Illinois], red milksnakes, $35 each; Baird's rat snakes, prairie kings, California kings, $25 each; Mexican milksnakes, Pueblans, albino speckled kings, $50 each; *ruthveni*, $75 each; *thayeri*, graybands, Durango mountain kings, $100 each; Arizona mountain kings, $125 each. Steve Mitchener, Oklahoma City OK, (405)748-6566 after 6 P. M. Central Time.

For sale: **Mandarin rat snakes**—captive born F^1 and F^2 generations, August/September '97, unrelated bloodlines, care sheet. Guaranteed healthy, feeding, sexed. Now accepting reservations, $700 each, $1300/pair or $1200/pair if paid in full in advance. Great Valley Serpentarium, Bill Gillingham, 2379 Maggio Circle C, Lodi CA 95240, (209) 369-7737 phone, (209) 369-3907 fax, E-mail <wbgill@inreach.com>.

For sale: beautiful, feeding snakes. Wholesale quantities to dealers, individual purchases welcome. Send SASE for **free** price list. Robert Applegate, P.O. Box 338, Campo CA 91906, (619) 478-5123. Also, free phone consultation on snake husbandry problems as a service to the herp community.

For sale: **first time offered in the U.S.**—*patternless* northern pine snakes. Absolutely 100% pure northern pines resembling miniature green patternless Burmese but with keeled scales! This is a simple recessive gene (not a domonant gene like in the patternless southern pines), so these animals should hold their value for many years to come. This mutation originated with a private breeder in Canada (see 1/95 issue of *Reptiles* magazine). Please review the magazine article or send $2 for pictures and copies of documentation pertaining to these incredible animals, which will undoubtedly be the next RAGE in colubrids! Well-established '96 yearlings available now, '97 offspring hoped for this summer. Steven Snow / Bill Kayser, P.O. Box 544, Rockton IL 61072, (815) 624-8204.

For sale: from Gaines Reptiles, Inc. — **South American tricolor hognose** (*Lystrophis semicinctus*). First offering in the U.S. of captive bred offspring. Only a limited number will be sold this year at $1000 each. Also, albino, 66% heterozygous & anerythristic Colombian boa constrictors available in June–July. Albino ball pythons expected later in the year. Other currently available inventory includes one male and two female c.b. '93 northern blue-tongue skinks, $825/trio; two male and three female c.b. '95 rough-scaled sand boas $600/group; and one male c.h. '95 Ruthven's kingsnake. Call Bill Gaines at (317) 878-4042 (Trafalgar, IN) or E-mail <bgaines@iccnet.com>.

For sale: **Northern Mexican pine snakes**, *Pituophis deppei jani*, as seen in the January 1997 *Reptiles* magazine, captive-born babies from a large, unrelated, locality-matched breeding group. The majority of *P. d. jani* in captivity originate from my stock. Care sheet included in every order. Alan Kardon, (210) 623-4311 after 6:00 P.M. Central Time.

For sale: expected '97 offspring. New Jersey coastal plains milksnake, sharp rust/orange, $50–250; anerythristic Hondurans, $1000, possible hets, $250; albino Florida garters, creamy yellow/white, nice, $300, hets, $150; albino plains garters (two bloodlines); albino Cal kings, lavender/white & gorgeous yellow with purple splotches, $300, hets, $150. Scott, (919) 934-0110. [NC]

For sale: Send SASE to CRC, P.O. Box 0731, Las Vegas NV 89125-0731 for brochures and list of species available. Limited bookings available for guided tours of herpetological collection sites in Nevada. Call/fax (702) 471-0240. E-mail <fpglwmau@anv.net>.

Free to good home: female Burmese python. Tonya Maris, (630) 851-2331

Herptile shows: **Repto-rama** — live educational presentations of local herps and herps of the eastern U.S. for parties, scout groups, nature centers etc. **Salamanderiffic** — live educational presentations and exhibits of the tailed amphibians of the U.S. for nature centers, scout groups, community centers, etc. For all age groups. Dave Golde, (847) 679-1530.

Advertisements (cont'd)

Pet-sitting service: Exotic pet-sitting by "The Lizard King," in-home care. CHS member since 1979. Marilyn Kent, (773) 989-4472.

Pet-sitting service: Complete in-home pet and plant care, specializing in reptiles and other unique pets. Dogs and cats welcome with open arms, midday dog walking. Experienced and dependable service by devoted animal lovers, serving Chicago and suburbs, reasonable prices, fully insured and bonded. Ask about our habitat consultation and custom-made cages. Exotics & More, (312) 728-5457 or page us at (708) 750-3688.

Software: **TRACS**™ record keeping and breeding software for IBM and compatibles. TRACS™ Professional, a full system, $129; TRACS™ *Lite*, for the hobbyist, just $39.95. Add $5 s&h, $10 outside U.S. Send for a working demo for $10 (cost may be applied toward purchase). Or download demo free via Internet at <http://www.herp.com/tracs/>. Send check or money order to Leapin' Lizards, 23852 Pacific Coast Highway, #375, Malibu CA 90265.

Tours: Adventure tours to Madagascar! Join **Bill Love** seeing and photographing fauna and flora, heavily herp-biased, across the world's least known mini-continent. Much more fun than shoveling snow November–February. Contact him at: BLUE CHAMELEON VENTURES, P.O. Box 643, Alva FL 33920. TEL: (941) 728-2390, FAX: (941) 728-3276, E-MAIL: <blove@cyberstreet.com>.

Tours: **Road-riding in Costa Rica!** Treat yourself to the trip of a lifetime! Learn about tropical herps, find them, photograph them, see where they live. **Greentracks, Inc.**, offers the best herpetological tours led by internationally acclaimed herpetologists and herpetoculturists. See the Amazon, visit cloud forests, experience the world's greatest rainforest, super sunsets and good company. Call (800) 9-MONKEY.

Wanted: lace monitors—any size. Bryan Waterloo, 1934 Scoville, Berwyn IL 60402, (708) 788-9355.

Wanted: **U.S. salamanders**. I need mole (*Ambystoma talpoideum*), flatwoods (*A. cingulatum*), smallmouth (*A. texanum*), ringed (*A. annulatum*), barred tiger (*A. tigrinum mavortium*), long-toed (*A. macrodactylum*), Tremblay's (*A. "tremblayi"*), silvery (*A. "platineum"*; I have permits), Mabee's (*A. mabeei*), northwestern (*A. gracile*), California giant (*Dicamptodon ensatus*), slender (*Batrachoseps* sp.), clouded (*Aneides ferreus*) and black (*A. flavipunctatus*); and ensatinas and other species. They are to be used for educational exhibits and programs. Cash, trade or donation. Dave Golde, (847) 679-1530.

Wanted: aberrant, unusual garter snakes. Scott, (919) 934-0110. [NC]

Wanted: big-headed turtles; mata mata turtles; Mexican giant mud turtles (*Staurotypus triporcatus*); exceptionally large common snappers (45 lbs. & up); large alligator snappers (over 90 lbs.); spectacled caiman from Trinidad, Tobago and Surinam; dwarf caiman; smooth-fronted caiman; albino turtles (except red-eared sliders). Walt Loose, (610) 926-6028, 9:00 A.M. – 1:00 P.M. or after 11:30 P.M. Eastern Time.

Wanted: c.b. spiderling or yearling Mexican red-knees (*Euathlus smithi*). I may also be interested in other taxa. Craig Roehm, P.O. Box 10834, Erie PA 16514, (814) 455-5246.

Wanted: Styrofoam boxes, any size or shape so long as they're not flimsy, preferably with cardboard liners, willing to pay from $2 to $5. Bring to CHS meetings. Scott J. Michaels, D.V.M, Serpent City, (815) 363-0290.

Line ads in this publication are run free for CHS members — $2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (773) 588-0728 evening telephone, (312) 782-2868 fax, E-mail <MADadder0@aol.com>.

News and Announcements

COLLINS AWARD FOR EXCELLENCE IN KANSAS HERPETOLOGY

The Kansas Herpetological Society (KHS) recently announced the establishment of the Suzanne L. and Joseph T. Collins Award for Excellence in Kansas Herpetology. The Collins Award will be given once each year to a member of the KHS at the the annual meeting of the society. The Award is funded by a trust in perpetuity, and should increase in amount each year through reinvestment. During its initial year the award will minimally be for $700 and may be as much as $1000. The first Collins Award will be presented at the Silver Anniversary Meeting of the KHS in Lawrence during November 1998.

1997 UPSTATE HERPETOLOGICAL ASSOCIATION GRANT

The Upstate Herpetological Association (UHA) is now accepting applications for a grant in the amount of $500. This grant is intended to support herpetological conservation, education or research. All proposals must be received on or before September 30, 1997. The successful applicant will be notified on or about December 15, 1997.

Applicants need not be a member of UHA nor a professional herpetologist but shall be able to demonstrate a sincere interest in herpetology and the ability to complete the endeavors for which the grant is awarded. Successful applicants will be expected to submit a report of their work for publication in the association's newsletter, "Herp Beat," and/or give a presentation to either the Syracuse or Albany chapter of the UHA. It is expected that the successful applicant will acknowledge the UHA's support in any publications that result in whole or in part based on funding by UHA.

Applications should include the purposes for which the grant is requested, the uses to which the grant will be put, and enough background information to enable reviewers to assess the applicant's ability to accomplish the objective for which the grant is requested. All applications should contain a *completion date* for the project. Applications should be held to a maximum of five pages, typed, double spaced. Applications should be submitted to UHA, % Ed Schoene, D.V.M., HCR 68, Box 30B, Springfield Center NY 13468. Questions should be directed to Dr. Schoene.

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, May 28, at the Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, in Chicago. There will be no featured speaker at this meeting. Instead, after the business portion of the meeting, we will break up into workshop groups to discuss specialized areas of herpetoculture. There will be groups on snakes, turtles, lizards, amphibians and herp medical problems, led by CHS members with first-hand practical knowledge in these areas.

Our annual **Show & Tell** meeting is set for June 25. This is traditionally our best-attended meeting. All members are encouraged to bring a favorite animal and to be prepared to come up on stage and tell us something about the animals they have brought.

We are required to use the entrance on the west side of the museum. We have permission to use the staff parking lot to the west of the museum. Entrance to this lot is from McFetridge Drive, the wide street just to the south, between the museum and Soldier Field. **Due to the recent rerouting of Lake Shore Drive, there have been some changes in traffic flow – follow the signs to the "Museum Campus." From southbound Lake Shore Drive this means a right turn onto Roosevelt Road followed by a left on Columbus Drive.** The Roosevelt Road (12th Street) bus now goes directly to the museum, thus providing a connection with the el and subway. This bus service runs until after 11 P.M.

Turtle Club

The Chicago Turtle Club will meet Sunday, May 25, 1:00–3:30 P.M., at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. (Bad planning by the CTC to hold a meeting while ReptileFest is going on, see below.)

Amphibian Club

The next meeting of the Amphibian Club will be 7 – 9 P.M., May 23, 1997, at the Skokie Public Library, 5215 Oakton. Dave Golde will display and discuss his diverse collection of U.S. salamanders, many of which were collected on a recent trip to the Appalachians. A field trip for June will be scheduled at this meeting. Call Dave Golde at (847) 679-1530 for additional information.

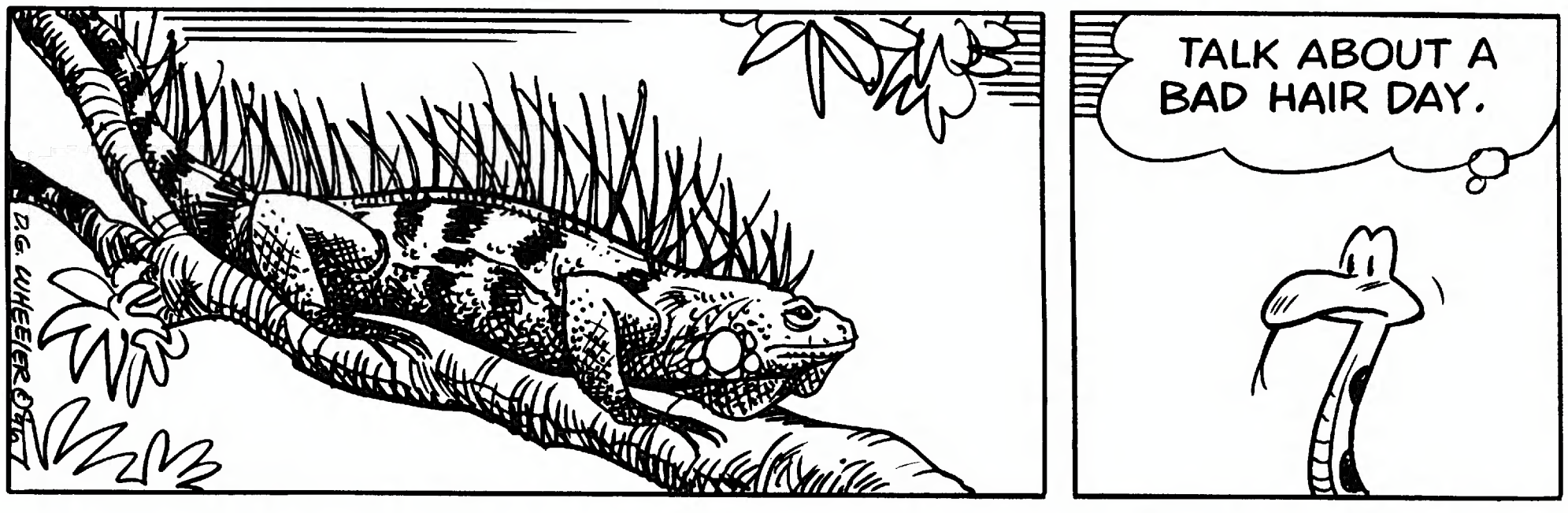
REPTILEFEST

You will probably receive this *Bulletin* prior to the date of the CHS ReptileFest, which is to be held May 24–25 at the Clarion International O'Hare Hotel, 6810 N. Mannheim Road, just south of the Rosemont Horizon. If so, it's still not too late to sign up to display your animals. Call Ron Humbert at (630) 620-7377. For those who do not want to bring animals, volunteers are needed to help with the show. Even if you neither have animals to bring nor want to volunteer, you can still help out by attending the show as a spectator.

MOVING??

Please let us know in plenty of time of any change in your mailing address. The *Bulletin of the Chicago Herpetological Society* is sent to our U.S. members by bulk-rate third class mail. This means that the U.S. Post Office will not forward your *Bulletin* with the rest of your mail. This is so even if you make a special request that your magazines be forwarded (such a request only applies to second class mail).

THE ADVENTURES OF SPOT



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